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FM 18-21

WAR DEPARTMENT FIELD MANUAL

TANK DESTROYER

TOWED GUN PLATOON

WAR DEPARTMENT • 1 APRIL 1944

WAR DEPARTMENT,
WASHINGTON 25, D. C., 1 April 1944.

FM 18-21, Tank Destroyer Field Manual, Towed Gun Platoon, is published for the information and guidance of all concerned.

[A. G. 300.7 (23 Feb 44).]

BY ORDER OF THE SECRETARY OF WAR:

G. C. MARSHALL,
Chief of Staff.

OFFICIAL:

J. A. ULIO,
Major General,
The Adjutant General.

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(For explanation of symbols see FM 21-6.)

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SECTION I

GENERAL

1. SCOPE. a. This manual covers the tactical employment of the towed tank destroyer platoon and includes descriptions of certain techniques that are not covered in other manuals.

b. The manual is designed as a guide only and does not lay down a set of inflexible rules. All commanders must be encouraged to solve each tactical situation according to the various factors involved.

2. EQUIPMENT. The towed tank destroyer platoon is organized and equipped for the destruction of tanks and for executing many other missions by both direct and indirect fire.

3. MISSIONS. a. The primary mission of the platoon is to destroy hostile tanks. It accomplishes this mission by—

- (1) Executing thorough reconnaissance.
- (2) Selecting the best available gun positions.
- (3) Making maximum use of cover, concealment, secrecy, and deception.
- (4) Coordinating plans and actions with adjacent tank destroyer platoons and with other nearby troops.
- (5) Destroying the enemy with accurate, surprise fire.



Figure 1. Towed gun.

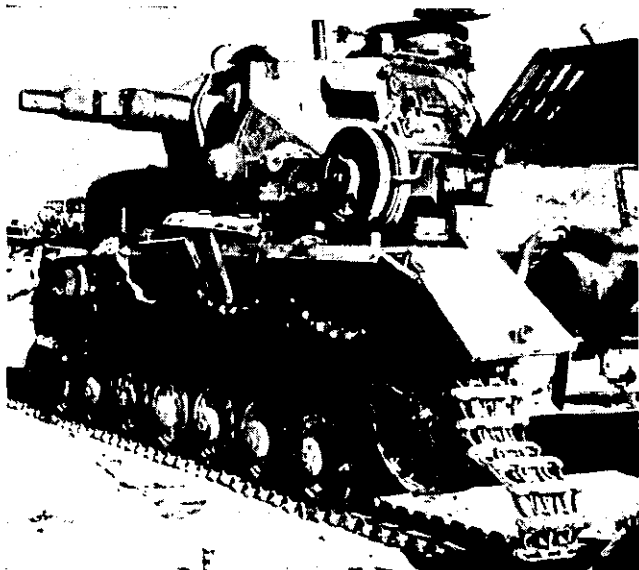
b. Secondary missions (reinforcing artillery, augmenting the fire of armored units, support of infantry by direct fire, beach defense, assault of fortified positions) are described in section IX.

4. TRAINING. **a.** Training provides the skill and the will to win. Well-trained football teams suffer fewer injuries than poorly trained teams; probably most of you have seen a strong, tough team run over a weaker opponent so hard that several players of the weaker team had to be carried from the field. Likewise, the weak platoon will be run over in battle; soldiers on the losing side in battle fare far worse than do the losers in athletics contests. In order to be winners, all members of the platoon must train to form a hard-hitting, tough team.

b. Individual training in the many subjects a soldier must know is described in other field manuals; this manual shows how the individuals of a platoon work together



① *Many weeks of individual training and practice in team play are behind every touchdown---*



②---and are even more essential for the destruction of the enemy.
Figure 2. Result of training.

in order to form a team, and how that team functions to beat the enemy.

c. The platoon must be trained to march, to protect itself by active and passive security measures, to select and occupy good firing positions, and to shoot. (For gunnery, see FM 18-30 (when published).) The goal of all training, both individual and unit, is the development of skills that become habitual, even during the stress of battle.

d. The ability to use the ground in the selection of good gun positions must be developed through practice. Terrain plots are a valuable training aid. These may be as simple or as elaborate as time and facilities permit. The only essentials are that the terrain plot show ground forms and some terrain features in miniature and that a scale be announced so that ranges, locations, and dispersion of positions can be realistic. When a built-up terrain plot is not available, a few shovelfuls of dirt shaped into ground forms, or a blanket thrown on a table or on the floor and crumpled into hills and valleys, will give good results. Terrain plots, or any simple substitutes, are valuable not only for training in selecting individual gun positions but also for preliminary training in occupation of positions and in the execution of combat formations and missions.

e. Tactical walks are of great benefit to the platoon commander and his gun commanders for training in appreciation of the ground to bring out how materially it affects the siting of the guns. A gun should be taken on the tactical walk. After positions are selected by a reconnaissance on foot, the gun is placed in position and the various aspects of the location noted and discussed. The class then moves to inspect and discuss the position from a view afforded an assumed enemy. Small accidents of terrain greatly influence gun positions. Only by training on the ground, and by constant practice in seeing it and evaluating it, can the selection of good gun positions become habitual.

SECTION II

MOVEMENTS

5. GENERAL. Successful engagements begin with successful marches. The platoon in battle position, ready to fight, is proof that each responsible individual in the platoon—officer, sergeant, corporal, private—has paid continuous attention to details during the march that brought them there. The over-all supervision—contact between all vehicles, control of distances, vehicle operation, conduct of personnel, maintenance, supply, and planning ahead—is the platoon commander's function. The execution, however, depends on the key enlisted personnel. Vehicle commanders take energetic and active control of their vehicles. They enforce march and light discipline. They see that crew maintenance, camouflage, and security are automatic at halts. They demand that their vehicles and crews conform in all respects to special instructions or to standing operating procedures, and constantly check to insure that each man in the platoon knows what his job is and that he does it.

6. MARCH DUTIES. The following lists of duties before and during movements will be used as a guide and should be amplified or modified as experience warrants.

a. Platoon commander. (1) Alerts platoon.

(2) Assembles noncommissioned officers and issues orders. Makes certain that all know the situation, route, and des-

tion; issues overlays or sketches of route when time is available.

(3) Gives special instructions on actions in case of surprise attack (ground or air).

(4) Checks—

(a) Weapons and equipment, maintenance of vehicles, ammunition, fuel supply, rations. (These checks are continuous before, during, and after movement.)

(b) Radio set.

(c) Intervehicular distance.

(d) Observance of blackout instructions, to see that vehicles and men move clear of roads and take advantage of cover and concealment at halts.

(e) Maintenance, refueling, and security at halts, to see that prescribed speed is maintained.

(5) Keeps oriented as to his location at all times by observation of the terrain, by map, and by noting odometer distances.

(6) At unscheduled halts, checks with unit ahead as to cause of halt.

(7) Sees that all of his vehicles move at resumption of marches, especially at night.

b. Security sergeant. (1) Alerts security section.

(2) Informs members of section of platoon commander's orders.

(3) Checks—

(a) Weapons and equipment, including a special check to see that machine guns are clean and adjusted, ready to fire at all times.

(b) His vehicles for maintenance, equipment, ammunition, gasoline and rations.

(c) Ammunition trailer.

(d) Radio set.

(e) That his vehicles are properly concealed at halts; that drivers are awake at night halts.

(4) Relays visual signals.



Figure 3. Simple terrain plot. The vehicles are represented by wooden blocks or by cardboard boxes; the models of the guns are made by inserting cartridge cases in folded pieces of cardboard.



Figure 4. Elaborate terrain plot.

- (5) Provides security on marches and at halts as directed by platoon commander.
- (6) Maintains blackout discipline.
- (7) Rotates drivers and observers so that some individuals do not become excessively fatigued.

c. Security corporal. (1) Acts as messenger for platoon commander in alerting platoon and controlling column.
 (2) Assists platoon commander to reconnoiter routes, particularly for cross-country or night movement.
 (3) Assists security sergeant in any of his duties, as sergeant directs.

d. Gun commander. (1) Alerts gun crew.
 (2) Informs members of gun crew of platoon commander's orders.
 (3) Keeps crew alert against surprise air or ground attack.
 (4) Checks—
 (a) Equipment of men.
 (b) Prime mover for maintenance, equipment, ammunition, gasoline, and rations, prior to march and at halts.

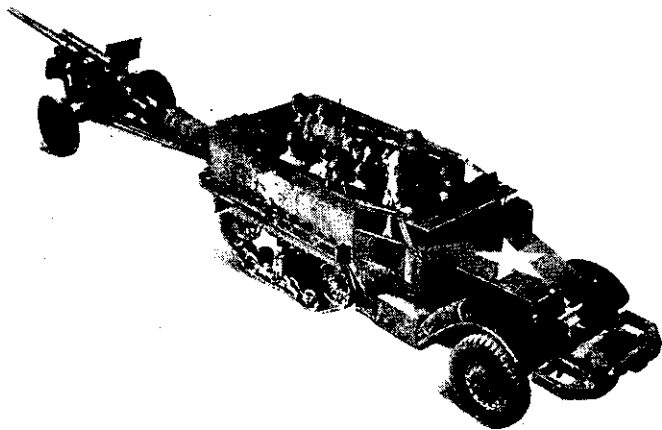


Figure 5. Gun crew during a march. One member of this crew is not performing a duty described in the check list; who is he? (For answer, see par. 59.)

(c) That gun and machine gun are clean and adjusted, ready to fire at all times.

(d) Radio set.

(e) That gun is clear of road and under cover at halts.

(5) Sees that driver maintains proper distance, speed, and road position.

(6) Relays visual signals.

(7) Maintains blackout discipline.

(8) Has driver stay awake at night halts.

(9) Rotates drivers, observers, and air sentinels so that individuals do not become excessively fatigued.

e. Gunner corporal. (1) Keeps gun clean, boresighted and otherwise adjusted, ready to fire at all times.

(2) Assists gun commander in above duties as directed.

(3) On the march observes, or causes another member of the crew to observe, gun for travel, brake action, and unusual incidents.

f. Platoon sergeant. (1) Assists platoon commander in any of his duties as platoon commander directs.

(2) Usually marches at rear of the platoon.

(3) Maintains visual contact.

(4) Assigns one observer in his vehicle to watch toward rear.

g. Section leader. (1) Commands one of his squads as well as his section.

(2) Transmits and has executed all orders and instructions of the platoon leader.

(3) While marching in combat zone, constantly studies the terrain, and is prepared to place guns in action promptly.

7. FORMATIONS. **a.** Formations used must be adapted to the ground and to the presence of other troops, both friendly and enemy. Two standard formations, the column and the wedge, are described in FM 18-15. The wedge is illustrated in figure 6; two other formations, line and echelon (left), also are shown. The column is used chiefly for road movements, through wooded areas, during darkness, and when other conditions limit visibility. Formations in line can be used when the terrain or friendly troops provide security against flank attacks. Echelon formations extend in the direction of an exposed flank and lend themselves to quick maneuver in that direction as well as to the front. Wedge formations are used where both flanks are exposed; maneuver toward either flank or to the front is thus facilitated. In most cases, the wedge is preferable to other formations because it adapts itself to control and to medium or wide dispersion.

b. Units that have need of other formations should not hesitate to design them. Formations for getting into battle should not be standardized throughout all tank destroyer

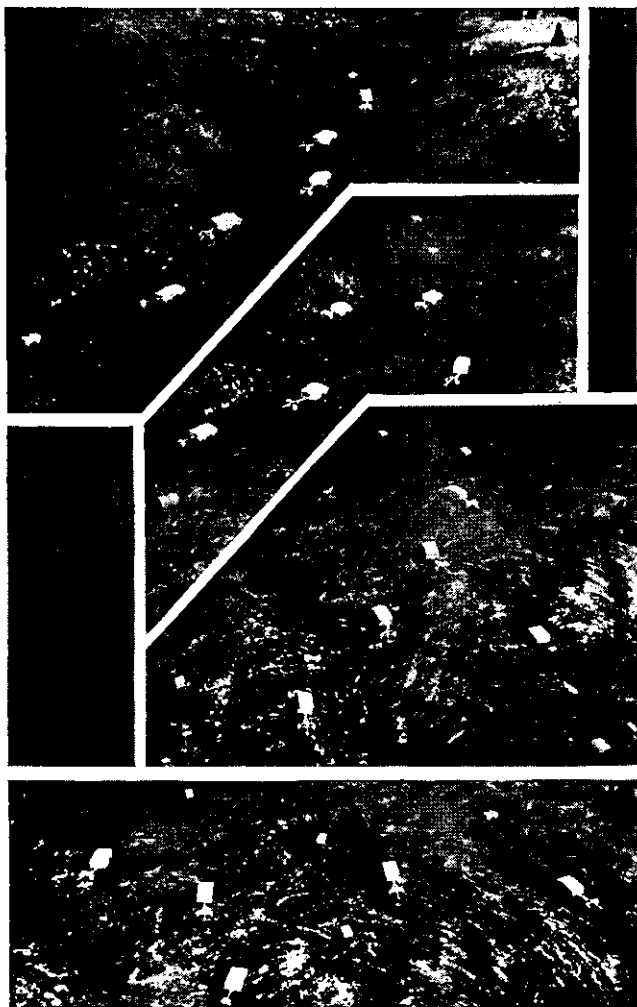


Figure 6. Platoon formations.

units. The use of different formations by various units facilitates deception.

c. Platoon commanders must not be satisfied with merely designing formations; the platoon must practice these formations until it is "letter perfect" in their execution.

8. ADVANCE GUARD FORMATIONS. a. A gun platoon often forms the advance guard for the rest of the company. When the company is the advance guard for the battalion, a platoon will constitute the advance party. The formation used will be the same in both cases.

b. When terrain permits cross-country travel, a dispersed formation will be employed. Such a formation gives flank as well as forward protection. It also enables the leading troops to be in position to execute flanking fire against an enemy detachment defending a road block.

c. When the movement is on a road and the terrain on both sides of the road prohibits cross-country movement at a speed equal to that maintained by the main body, then and then only will the leading platoon remain on the road. (For further discussion of advance guard actions, see pars. 47 and 48.)

9. SECURITY DURING MOVEMENT. a. On the march, the platoon leader provides for the security of his unit by the dispersion of vehicles, the use of covered and concealed routes, the avoidance of dust whenever possible, camouflage discipline, strict compliance with blackout instructions when moving at night, the elimination of all unnecessary noise and traffic, and by judicious use of the security section.

b. When contact is imminent, the platoon moving alone will use its security section as a screen. The screen precedes the towed guns to protect them from surprise fire of enemy small arms, automatic weapons, and antitank guns. Both the security vehicles and the towed guns will advance by successive bounds between commanding terrain

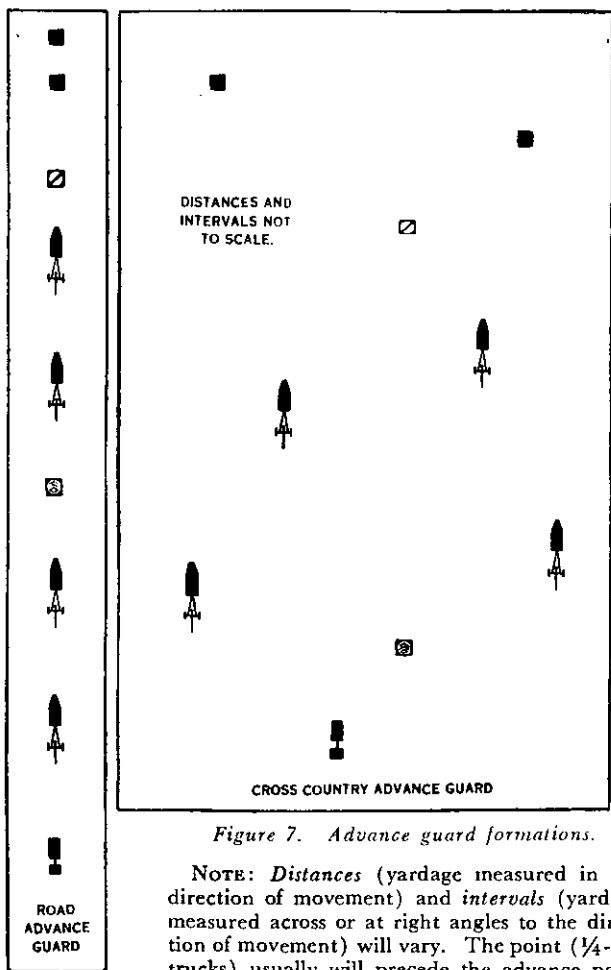


Figure 7. Advance guard formations.

NOTE: *Distances* (yardage measured in the direction of movement) and *intervals* (yardage measured across or at right angles to the direction of movement) will vary. The point (1/4-ton trucks) usually will precede the advance party by 500 to 1,000 yards. Other distances between vehicles will be from 200 to 300 yards. Intervals in the cross-country formation are such that it covers a front of 500 to 1,000 yards, or even greater during desert or prairie operations.

features. When not required elsewhere, the platoon commander habitually moves with the security section; the platoon sergeant controls the rest of the platoon from a position in front of the guns.

c. The dispersion of vehicles for security against air attack on the march is the maximum permitted by road space without loss of control. The usual intervehicular distance is about 100 yards; it may be increased to 10 vehicles per mile when enemy airplanes are active. At times, when our forces have air superiority, lack of such space will cause the use of much shorter distances. Air sentinels are posted in each vehicle and antiaircraft machine guns are manned continuously. Although air attacks may be anticipated at any place, the most dangerous areas are at bridges or defiles.

d. Prior to the beginning of the march, instructions will be issued whether to halt or to keep moving in the event of an air attack.

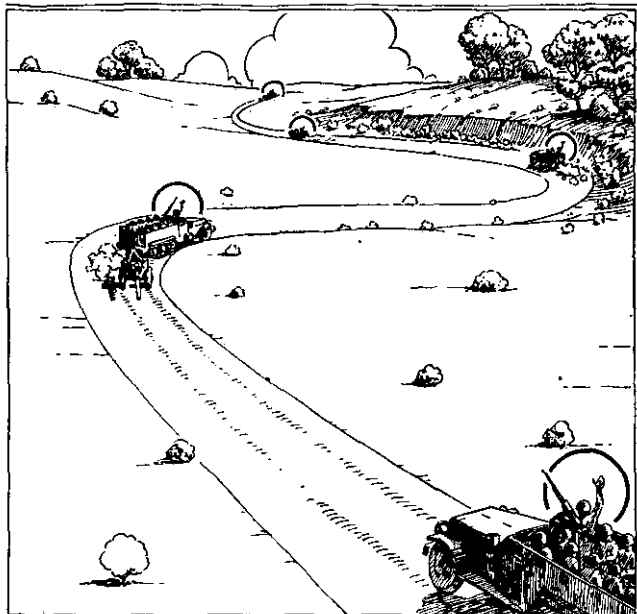
(1) ACTION WHEN TROOPS HALT DURING AIR ATTACK.—Vehicles leave the road as far as possible and halt under available concealment; troops not manning antiaircraft weapons dismount and disperse; personnel fire all suitable weapons at the attacking aircraft.

(2) ACTION WHEN MOVEMENT IS CONTINUED.—Vehicles maintain distances on road or, if terrain permits, disperse laterally while continuing the forward movement; the fire of all suitable weapons is brought against the airplanes. The platoon cannot afford to stop every time enemy airplanes appear. Such halting might enable a few airplanes to keep the platoon from performing its assigned mission.

10. HALTS. a. Vehicles are kept at road distance during halts unless the order is given to close up. Vehicles are moved off the road or trail if possible before halting, and stopped under a tree, against a bush, or behind nearby cover. If possible, they are stopped in a shadow. All



RESULT OF CARELESS MARCHING

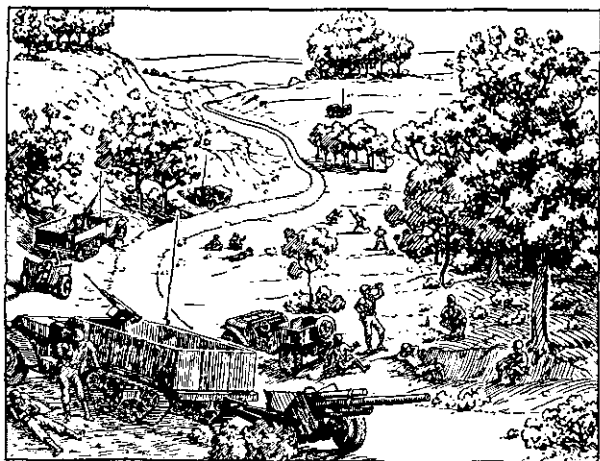


GOOD MARCHING

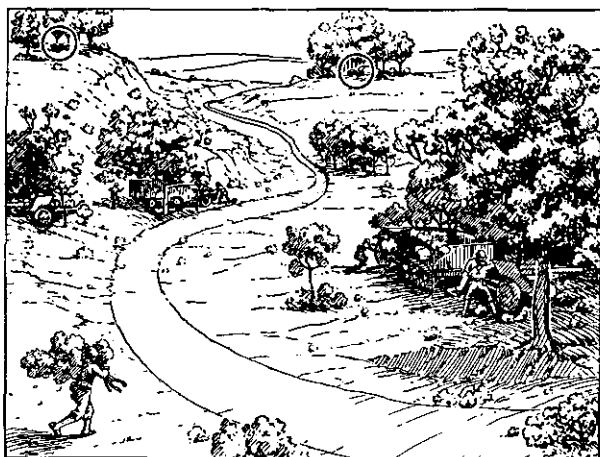


BOMBS SELDOM HURT MEN WHO ARE ALERT AND DISPERSED

Figure 8. Security on the march.



① *WRONG. Loafing, no observation, bunching in open.*



② *RIGHT. Purposeful activity, observation, dispersion.*

Figure 9. Halts.

platoon personnel will be busy at a halt, unless its purpose is to provide rest; normally, resting is done only in bivouac.

b. The platoon leader immediately determines that security measures are being executed. These measures include dispersion and concealment of vehicles and personnel and, in the presence of the enemy, the establishment of observation posts covering all possible routes of surprise approach. He then checks the condition of all vehicles and the execution of maintenance activities. If enemy attack is imminent, all guns will be uncoupled, placed in a firing position, boresighted, and completely prepared for action.

c. If the reason for the halt is not clear, the platoon leader will investigate. He will maintain contact, particularly at night, with the unit just ahead so that when the march is resumed no time will be lost in falling into column.

SECTION III

BIVOUACS

11. OCCUPATION. a. The essential requirement during movement into bivouac is speed in clearing the road and finding cover and concealment. To facilitate getting into the platoon area quickly, the platoon commander should precede his unit so that he can meet it as it enters and personally show the sections their positions. When this cannot be done, a noncommissioned officer should be sent ahead. The object is to clear the road and get under cover; original positions may be improved later.

b. Occupation of bivouac is facilitated by the use of a standard platoon plan. The prime movers move to the edge of the woods and guns are uncoupled, facing out. Prime movers are then placed under cover in the vicinity of the guns. The guns are disposed to cover the most likely avenues of enemy approach. Security vehicles are centrally placed, facing toward the route out of the bivouac. The ammunition vehicle should be kept near the center of the platoon area.

c. Should the platoon occupy an interior position where it could not use its guns to cover an edge of the bivouac area, the guns and prime movers are concealed and faced toward the route of egress.

d. The number of tracks which must be crased or covered with brush will be reduced if the area is entered in a column formation.

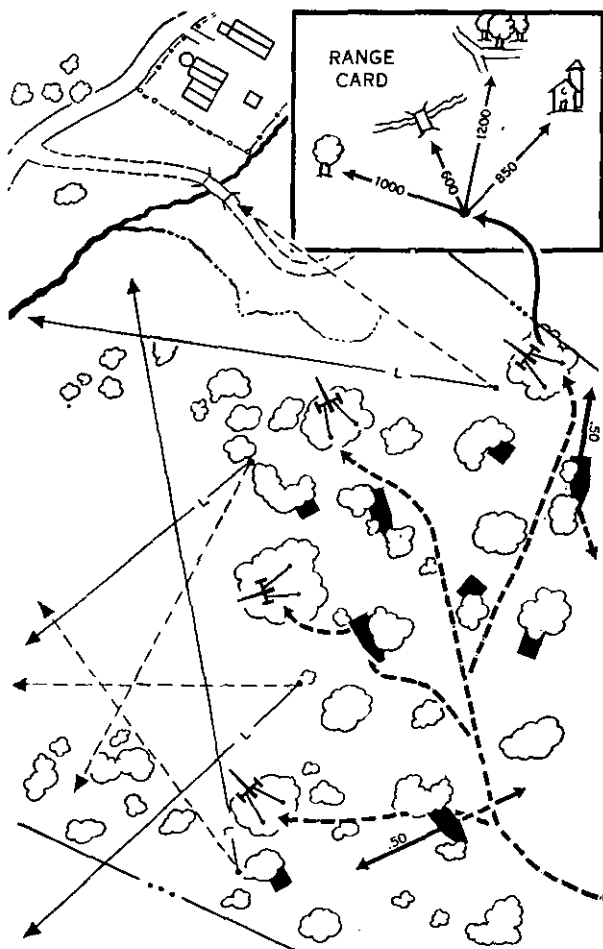


Figure 10. Bivouac area of an exterior platoon. The caliber .50 machine guns may be with vehicles (as shown) or on ground mounts, depending on the situation.

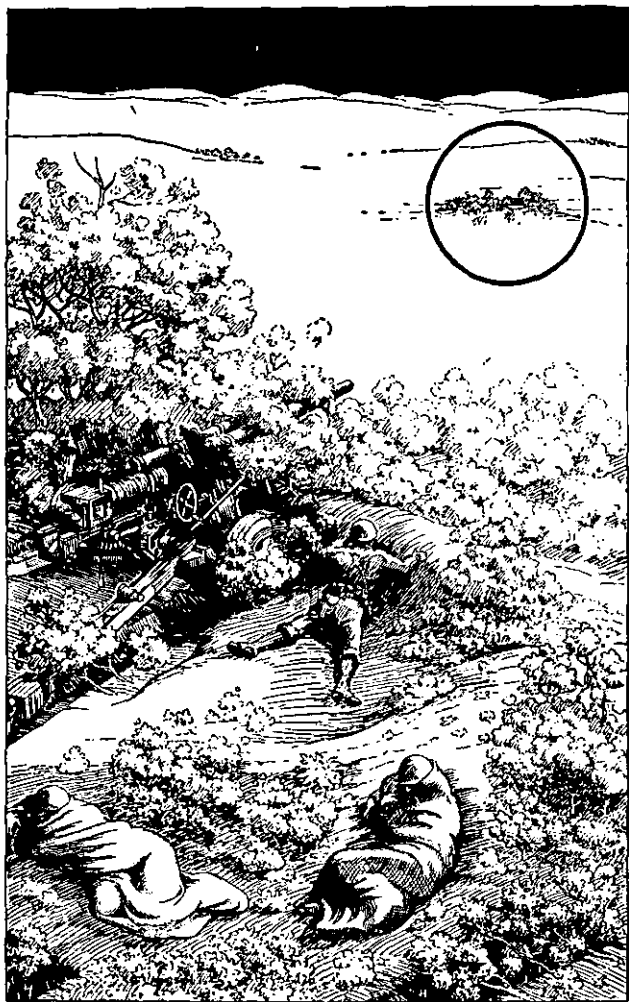


Figure 11. Security affords safe rest.

12. SECURITY AND SAFETY IN BIVOUAC. a. The establishment of security measures—outposts, dispersion, concealment, camouflage and blackout discipline—should be automatic upon occupation of a bivouac. (For security in general, see FM 18-5 and FM 21-75.) Since other troops usually furnish general security, the platoon ordinarily is responsible for local security and for manning that part of the outpost prescribed by the company commander. Security section personnel set up positions some 300 to 600 yards from the perimeter of the bivouac area. After dismounting machine guns, security vehicles are returned to covered positions in the bivouac area.

b. The mission of the outposts is to warn of surprise attack by hostile armor and to stop any attack by enemy troops which are vulnerable to small arms fire. Whenever possible, they maintain liaison with more advanced observation and listening posts established by higher headquarters and coordinate their field of fire with those of adjacent units. (For defense against raids, see par. 15.)

c. Within the platoon area all vehicles are dispersed with suitable cover and concealment. Guns are sited to cover all tank approaches. An adequate warning system is set up for ground, air, and gas attack. Camouflage discipline and the enforcement of blackout instructions are essential.

d. Some common-sense blackout safety precautions are:
(1) Individual vehicles moving within the bivouac in blackouts are preceded by a dismounted guide.
(2) Sleeping personnel are checked to see that none are near an engine exhaust.
(3) Before the platoon moves from bivouac in blackout, rolls are carefully checked to see that no one is left behind.

13. DUTIES IN BIVOUAC. After a bivouac has been occupied and organized for defense and security, first attention should be given to the combat readiness of the vehicles

and fighting equipment and the comfort and security of the men. In this, combat readiness of the vehicles and fighting equipment come first. Men take care of the vehicles and fighting equipment before they take care of themselves. Officers and noncommissioned officers see that vehicles, equipment, and the men are taken care of before they make themselves comfortable. Leaders must insure that men take precautions against bad weather, for example, by pitching shelter tents and ditching them. These matters and others to be attended to are contained in following lists of duties. Study them, learn them, apply them. Modify and amplify them as experience warrants. They will go a long way toward insuring that the bivouac is a good one and that the platoon is ready for combat when it moves out.

a. Security. (1) Has maximum use been made of old trails and paths in order to avoid making new ones?

(2) If it has been necessary to make new tracks, have they been obliterated?

(3) Are the vehicles dispersed? (50 to 150 yards.)

(4) Have the vehicles been camouflaged?

(5) Have plans been made for defense against raids?

(6) Are the guns covering likely tank approaches?

(7) Do small arms cover likely approaches for foot troops?

(8) Has the security been posted in the platoon sector and is it coordinated with other platoons?

(9) Have reliefs and inspections been arranged for security outposts?

(10) Have blackout instructions been given?

(11) Have prone shelters and fox holes been dug?

(12) Have air and gas sentries been posted?

(13) Are air and antitank warning system signals understood by all?

(14) Do all personnel know the challenge password and reply?

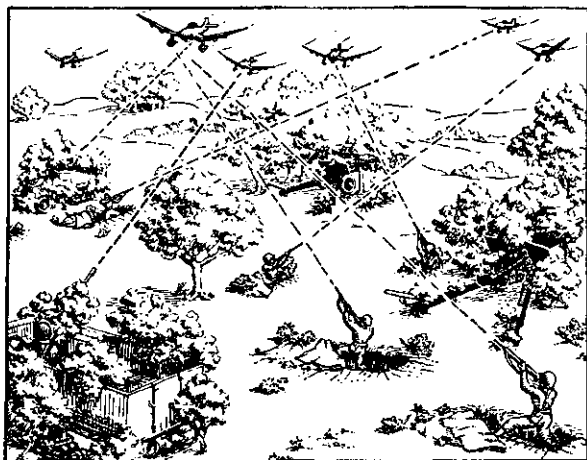
(15) Are the guns dug in?

- b. Combat readiness.** (1) Is the platoon familiar with the situation, friendly and enemy?
(2) Has first echelon maintenance been performed?
(3) Have all vehicles been refueled?
(4) Have the guns been cleaned, checked, etc.?
(5) Do all vehicles and personnel have basic ammunition loads?
(6) Have all radios been checked?

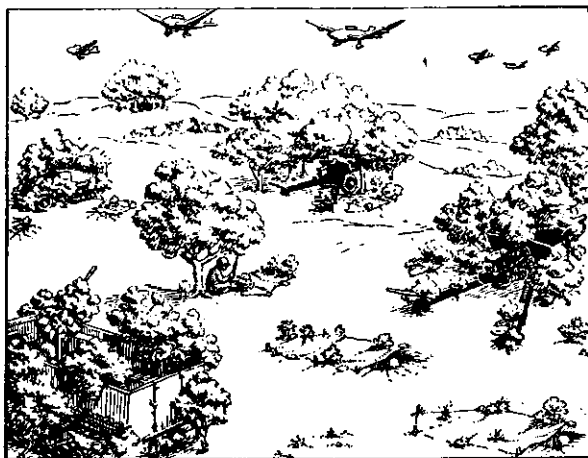
- c. Contacts.** (1) Has liaison been established with adjacent units?
(2) Has a messenger been sent to the company CP?
(3) Has the company commander been informed of the disposition of the platoon?
(4) Do the members of the platoon know the position of the company CP? Of the platoon CP?
(5) Is the location of sleeping personnel known to the key personnel of the platoon?

- d. Living in and leaving the bivouac.** (1) Do the vehicles have hard standing?
(2) Have routes of egress been reconnoitered? Marked for night movement?
(3) Have latrine facilities been provided?
(4) Have the men the best available shelter?
(5) Is the police of the area satisfactory?
(6) Are the prime movers accessible to the guns?

14. AIR ATTACKS. **a.** In the bivouac area all personnel will dig prone shelters or foxholes. Battle experience has shown that the shock of air bombing is greatly increased, however, by the fear of the unknown which a prone shelter or fox hole position generates. When hostile planes are sighted it must first be determined whether or not they have sighted your unit. They may attempt to draw fire for this purpose. If it is felt that they have not sighted you, withhold your fire. If they attack your unit, machine-gun and small-arms fire will be used. In any event, men will be encouraged to remain out of prone shelters or foxholes until



① *Shoot at enemy airplanes only when they attack you.*



② *Hide from airplanes that are not attacking you.*

Figure 12. Actions during air attack.

it is apparent that the airplanes are moving into position for an effective attack with bombs or guns. Greater loss of efficiency results from the mental strain and noise of an air attack than from actual casualties. It is absolutely vital that coolness and assurance be displayed by the platoon commander.

b. In movement out of bivouac, towed gun units are particularly vulnerable to air attack. The enemy appreciates this fact. The platoon commander must coordinate the egress of his unit with other troops in the area in order to avoid traffic bottlenecks. Also, his own vehicles must be dispersed as they move out—not bunched up with the idea of taking distance on the march.

15. DEFENSE AGAINST BIVOUAC RAIDS. a. Each platoon should develop and practice plans to be executed in the event of a surprise raid, especially at night. Regardless of how far to the rear your bivouac is located, there is always a possibility of a sudden raid by enemy troops who have slipped through the front line or who have been dropped from the air. Also, there might be times when there are no friendly troops between you and the enemy. For example, members of a unit might believe that they are safe because they are covered by friendly troops. The forward troops might withdraw without notice, leaving the unit exposed to attack.

b. Plans must cover both of two situations: when an armored and foot attack is an enemy capability, and when the enemy can attack only with foot troops.

c. In both situations, plans and actions of machine gunners and riflemen are the same. The platoon area should be subdivided into small defense areas, each center being based around a gun. The machine gun will be removed from the prime mover and placed on the ground. The driver and assistant driver will operate it. All security section personnel and machine guns not employed in the out-

post system will augment and interconnect the defense areas.

d. All machine guns are prepared for fire in predetermined directions. These bands of fire are laid down if the enemy attacks in force under cover of fog or darkness. (For details of preparing prearranged fire, see FM 23-45 and FM 23-65.)

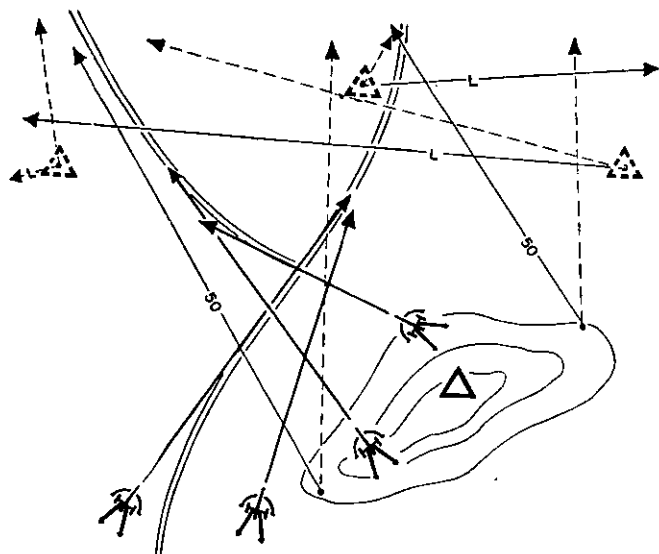


Figure 13. Dispositions for defense against night armored raid.

e. During a night raid, you must stay low and fire only at the enemy you can see. (Machine guns fire in prearranged directions in case of a strong attack.) If you are too anxious, blaze away when you have no target, you are doing just what the enemy wants you to do—disclosing your location and wasting your ammunition.

f. Combat experience clearly indicates that frequently tactics of enemy armor, when attempting to exploit minor gains, is to launch night tank attacks. Such attacks have

almost invariably been astride clearly defined terrain features to prevent losing direction in the darkness. Guns, therefore, should cover these avenues of approach. Outposts armed with rocket launchers remain alert for close-range shots. Outposts and listening posts should also be equipped with parachute flares for the purpose of warning the platoon when enemy tanks are identified. A separate prearranged signal should be devised for indicating an infantry attack. Continuous firing of the flares will aid materially in illuminating the area. In case no flares are available, the outposts draw the fire of the tanks by firing at them. Some success may be achieved in night combat by laying on the source of hostile tracers.

g. A night tank attack, with tracers flying everywhere, scares poorly trained troops. On the other hand, well-trained troops following a sound defense plan will defeat the enemy because the hostile troops are exposed while our own troops remain hidden.

SECTION IV

POSITIONS IN READINESS

16. GENERAL. A position in readiness is an area which an organization occupies while the battle situation is developing. There will probably be two or more combat areas in which the platoon may engage tanks. Choice of the battleground will depend upon enemy movements. While awaiting these movements, the platoon remains in a position in readiness, prepared to move rapidly into combat.

17. OCCUPATION OF POSITION IN READINESS. a.

While in a position in readiness the battalion and company commanders and other officers are reconnoitering and selecting possible combat areas. When time permits, the platoon commander and some of his noncommissioned officers also reconnoiter combat areas to select gun positions.

b. A position in readiness might be occupied for an hour or two, or possibly for 2 or 3 days. Troops and vehicles are therefore disposed as in bivouac. The position is continuously improved. Duties of personnel are identical with those of the bivouac position, except that the platoon commander makes last minute preparations for battle and sees that all men know and understand the situation and their part in it.



Figure 14. Final preparations for battle.

SECTION V

RECONNAISSANCE OF COMBAT AREA

18. RECONNAISSANCE PARTY. Gun positions should be reconnoitered in daylight and occupied and organized at night. There will be situations, of course, where this is not possible. The platoon commander usually takes one or more noncommissioned officers with him during his reconnaissance of the combat area. When there is ample time it is advisable that he also take the gun commanders with him, provided that a large party will not disclose preparations. Except when friendly troops within sight provide ample security, part of the security section should accompany the reconnaissance party to cover its movement by observation from advantageous positions to the front and flanks.

19. INSTRUCTIONS. The platoon commander will provide himself with radio communication to the platoon for emergency use. Before leaving, he should inform the senior remaining noncommissioned officer of the situation, the mission, his plans, and expected time of return. This will include all the details which he has in mind with reference to the employment of the sections. If he intends to await the platoon's arrival in the combat area, he will give detailed instructions regarding its route and method of movement forward, together with the time or upon what signal it will move.

20. ACTIONS DURING RECONNAISSANCE. **a.** While en route to the combat area, the platoon commander studies routes thereto, noting cover, concealment, and obstacles. Bridges particularly are noted; a ford should be selected if possible, to be used in event the bridge is later demolished. A detail from the platoon can make necessary improvements to the route while the commander completes his reconnaissance; the reconnaissance party should include a messenger to carry the directive for such work back to the platoon. If the work entailed exceeds the capabilities of the platoon, a report should be sent to the company commander.

b. Upon arrival at the combat area, the platoon commander studies and evaluates the ground; factors to be considered are described in section VI. He contacts friendly troops adjacent to or within his area in order to learn their dispositions and plans and to effect coordination of fires and utilization of ground.

c. Time and conditions permitting, the platoon commander reconnoiters the ground over which tanks might advance, looking for possible tank and infantry approaches and studying his combat area from the enemy's viewpoint. This reconnaissance of ground that the enemy might use will enable the platoon commander to observe many details which might otherwise be overlooked.

d. Maps should be studied during terrain reconnaissance in order to increase the accuracy of later references to the map.

SECTION VI

POSITIONS

21. PRIMARY FIRING POSITION. The primary firing position is the firing position from which a unit or weapon executes its primary fire mission.

22. ALTERNATE POSITION. An alternate position is a firing position from which the same fire mission can be executed as from the primary position. It should be selected prior to possible occupation and with the same care as is given the selection of the primary position; routes to it also are selected. Usually alternate positions should not be occupied under fire or when enemy fire is imminent.

23. SUPPLEMENTARY POSITION. A supplementary position is a firing position assigned a unit or weapon to accomplish missions other than those to be accomplished from primary or alternate positions. In other words, supplementary positions cover a sector other than that covered by primary and alternate positions. Supplementary positions frequently are used by rear guns to counter a flanking movement by the enemy; their use by forward guns is exceptional.

24. COVER POSITION. A cover position is a position in the immediate vicinity of the firing position which affords

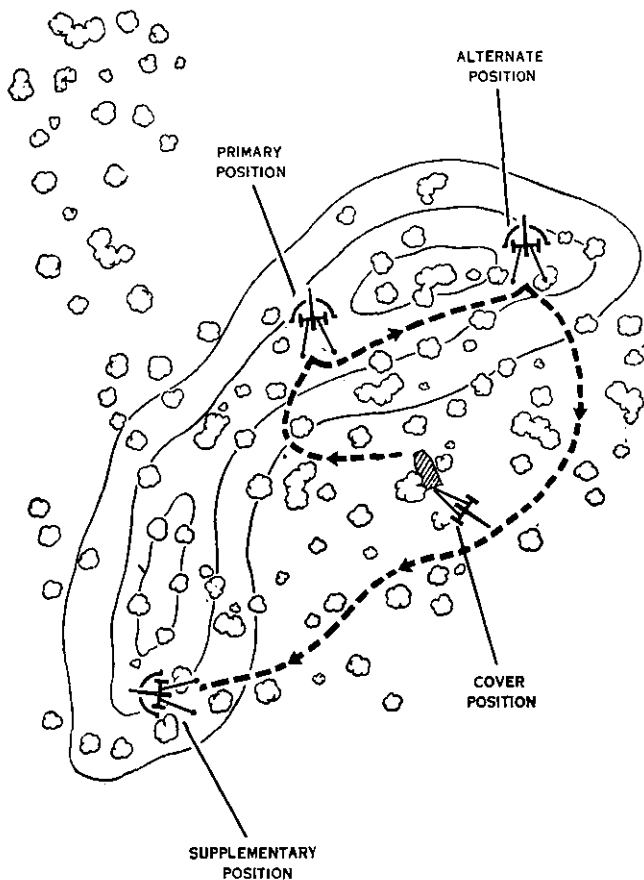


Figure 15. Primary, alternate, supplementary and cover positions.

NOTE: When time permits, alternate and supplementary positions are carefully selected and prepared in advance. Routes are reconnoitered and improved where necessary. Range cards are prepared for each position.

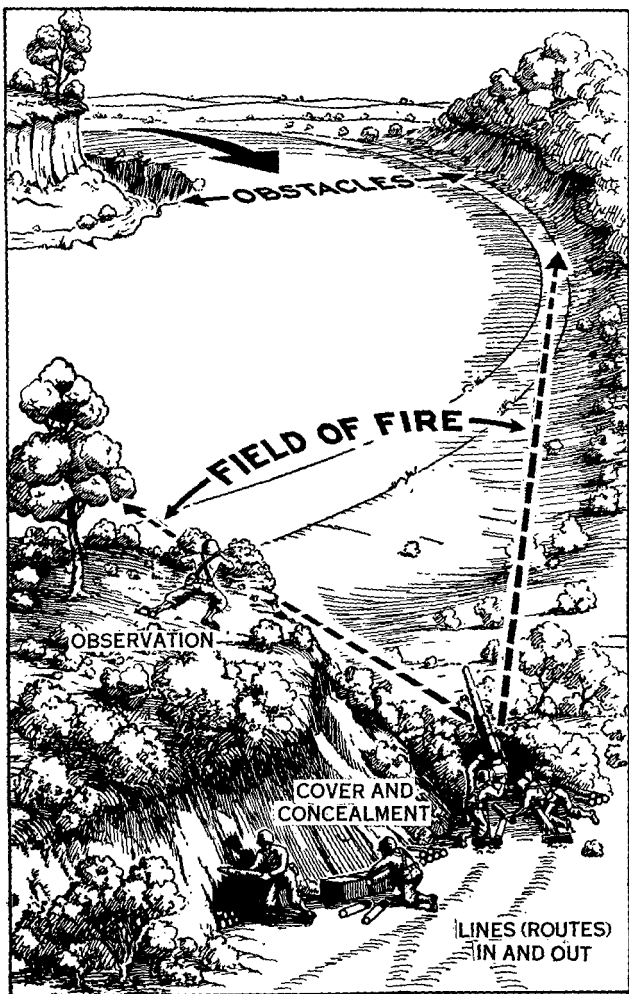


Figure 16. "FOCOL."

concealment and defilade. It can be used when the firing position is inadequate for cover and concealment. An observer is posted near the firing position to signal the gun to move into it just before hostile tanks come into the field of fire; guns are moved into position by hand or with the $\frac{1}{4}$ -ton truck. Towed guns occupy covered positions only when time is not available for digging in or for camouflage; the use is exceptional. A well dug-in, camouflaged gun position has all the advantages of a cover position.

25. SELECTION OF GUN POSITIONS. a. There are five factors to consider in the selection of gun positions. They begin with the letters of the key word "FOCOL" and are—

- (1) Field of fire.
- (2) Observation.
- (3) Cover and concealment.
- (4) Obstacles.
- (5) Lines (routes) in and out.

b. The selection of good gun positions depends upon knowledge of the five factors and a knowledge of ground. A trained leader can select a good, or at least a fairly good, position after a quick study of the terrain included in his assigned area. But no one can select the *best position* within an area until he has seen all of the possible positions *at each position itself and from the enemy's viewpoint*. When time permits, the leader should study the immediate position area; whenever possible he should go 500 to 1500 yards forward of the position to see his area as the enemy will see it. He can then study the advantages and disadvantages of each possible position and make his decision accordingly.

26. FIELD OF FIRE. a. Field of fire is the first consideration and is actually the only absolute requirement of a gun position. The weapon must cover the assigned sector. Regardless of other advantages or disadvantages, the selection of a gun position will revolve primarily about the field of

fire. When evaluating a field of fire, consider the following:

- (1) Can the gun cover all avenues of approach in its assigned sector?
- (2) Is the range long enough to enable the gun crew to destroy tanks entering the sector before they can overrun or

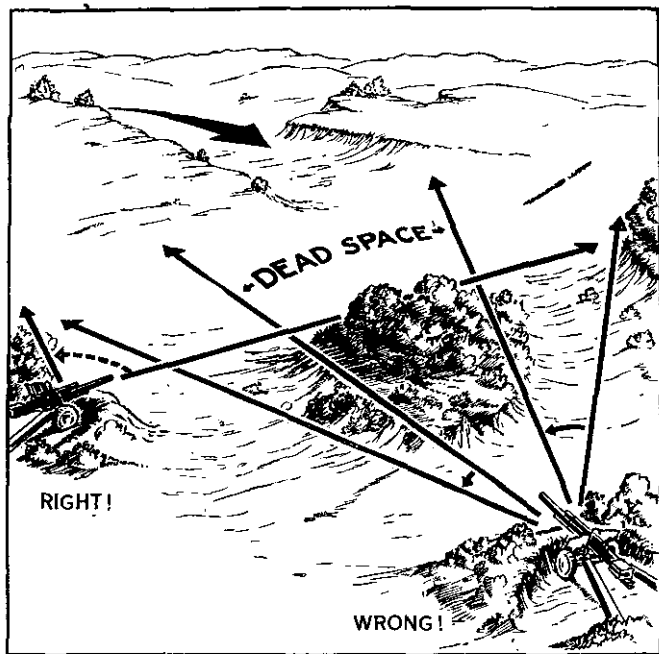


Figure 17. Avoidance of dead space.

bypass the position? (This requirement should not be misconstrued. It is not necessary that the field of fire extend as far as the gun's maximum effective range, particularly when the position affords flanking fire.)

- (3) Does the gun have any dead space which cannot be covered by another gun?



Figure 18. Hill-crest position.

b. Hillcrest positions. (1) A field of fire at times can be obtained only by the use of a hillcrest position. Ordinarily, such positions are avoided because they usually "skyline" the guns. However, they have certain advantages: the enemy will have difficulty adjusting artillery on the top of a steep hill because his "overs" go far over; enemy tanks and infantry cannot climb the hill rapidly; the position affords good observation and a long, wide field of fire.

(2) Errors of range estimation cause plunging fire to be less accurate than grazing fire. With correct range estimation, there is little difference in the comparative accuracies of the two types of fire. The excellent observation of "overs" and "shorts" afforded by high ground compensates for the slight inaccuracy of plunging fire.

27. OBSERVATION. **a.** Usually a gun position that has a good field of fire also affords good observation. However, dust and smoke from muzzle blast and the sun affect observation. A good gun position, from the observation factor, has the following characteristics:

- (1) Vegetation to lessen the amount of dust.
- (2) A cross wind to carry away dust and smoke.
- (3) A point nearby, up wind from the gun, from which the gun commander can observe the field of fire.

b. Besides having observation for each gun, the platoon commander needs a point from which he can see each gun as well as the actions of the enemy. When the platoon commander cannot see everything he should see from one position, he must establish an OP (observation post) from which an observer reports actions to him. Possible tank and infantry approaches from flanks and rear should be carefully observed.

c. Observation afforded the enemy also is a consideration. All possible measures should be taken to avoid being seen by the enemy; a particularly good means is to distract his attention by carelessly camouflaged dummy positions



Figure 19. Observation.



① *You should have a clear field of fire.*

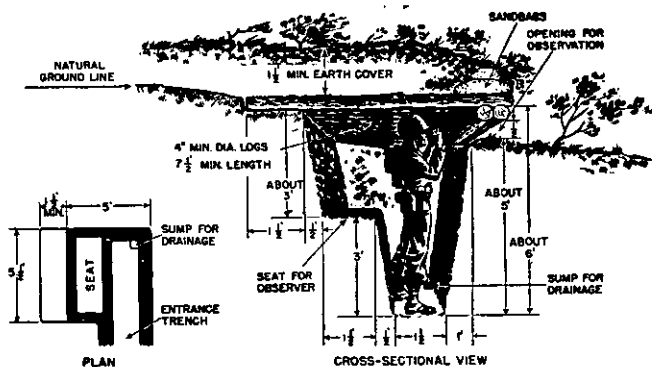


② *The enemy should not see your gun. However, he is very likely to see it. Why? (For answer, see par. 59.)*

Figure 20. Observation.



① *What is wrong with this camouflage? (For answer, see par. 59.)*



② *Construction of observation post.*

Figure 21. Prepared observation post.

or guns. To be effective, dummy guns must be emplaced in logical positions and the carelessness of camouflage must not be exaggerated. They must be placed so that fire brought upon them will not endanger nearby guns or other installations. (For construction of dummy positions, see FM 18-24 (when published).)

28. COVER AND CONCEALMENT. **a.** Cover is protection from fire; concealment is protection from hostile observation, either ground, or air, or both.

b. Natural *cover* is afforded by ground forms. Guns are given additional cover by digging in whenever time permits. Desirable cover would find the carriage of the gun in complete defilade—at least from the front, if not from the sides.

c. *Concealment* is gained by the advantageous use of terrain features and by camouflage. Positions defiladed from enemy observation, well dug-in and camouflaged, are highly desirable; a dug-in position gives a measure of concealment from ground observation.

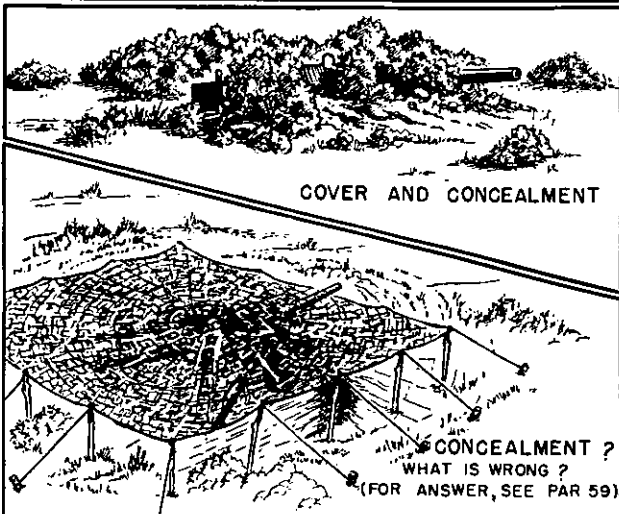
d. Full use of concealment must be made of terrain features other than the mere form of the ground. Seek a background with which the gun will blend and merge, rather than one against which it will stand out. "Skylining" is the perfect example of what *not* to have in a background. Trees, woods, and clumps of bushes offer concealment from both ground and air observation. Buildings, ruins, and derelict vehicles may furnish concealment. Rarely will the average position offer complete concealment; natural or artificial camouflage measures will usually be needed. For the principles of concealment and camouflage, see FM 5-20 and TM 5-267 (particularly supplements to TM 5-267).

e. For both concealment and cover, avoid the obvious; avoid prominent terrain features and isolated landmarks. They usually attract attention and fire by their very obviousness.

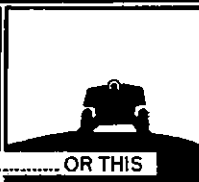
CONCEALMENT



COVER AND CONCEALMENT

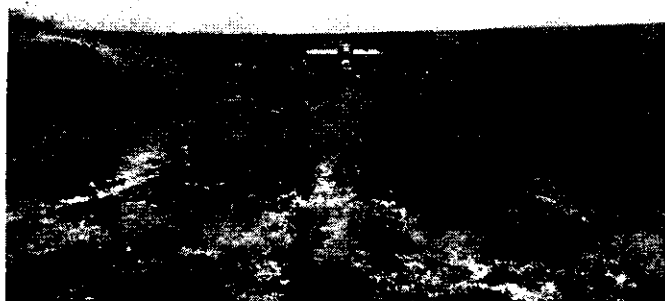


NEVER PERMIT THIS



OR THIS

Figure 22. Cover and concealment.



① *Before camouflaging.*



② *After camouflaging. Why is this a good position for open terrain? How can the camouflage be improved? (For answers, see par. 59.)*

Figure 23. Concealment.



① *Rear view of gun (fig. 23) before camouflaging.*



② *After camouflaging.*

Figure 24. Concealment.



① *Before camouflaging.*



② *After camouflaging. The net suspension should enable members of the crew to remove all or part of the net from within the emplacement without exposing themselves; furthermore, the camouflage construction should permit firing when the net is lifted and pulled clear of the muzzle only.*

Figure 25. Concealment.



① *Rear view of gun shown in figure 25 before camouflaging.*

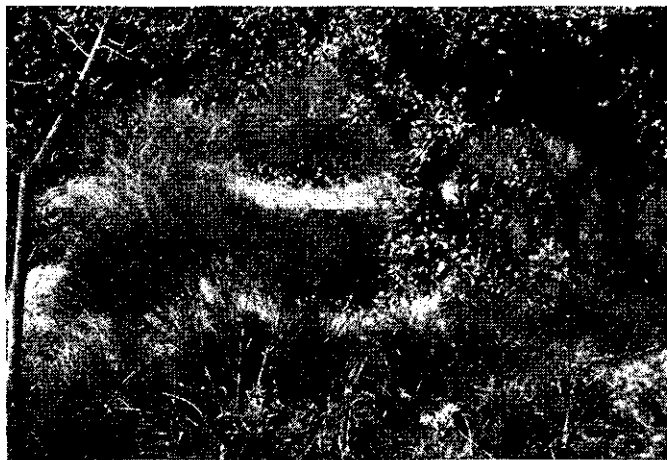


② *After camouflaging.*

Figure 26. Concealment.



① *Rear view of hastily occupied position.*



② *Front view, showing natural camouflage.*

Figure 27. Concealment.



① *Before camouflaging.*



② *After camouflaging. What is wrong? (For answer, see par. 59.)*

Figure 28. Concealment.

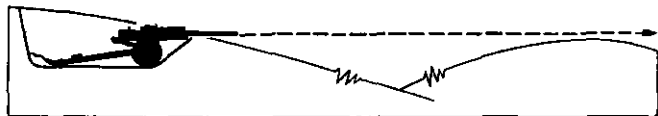
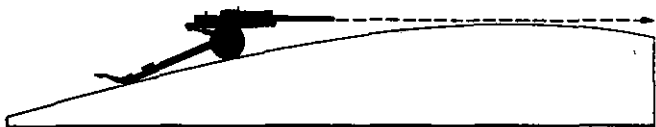


Figure 29. Partial defilade positions.

f. Partial defilade positions. Cover and concealment frequently can be obtained hastily by the occupation of a partial defilade position.

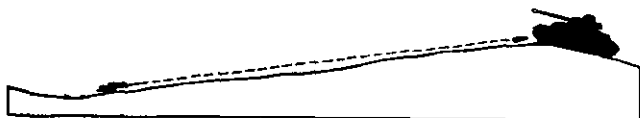
(1) A partial defilade position is one in which the crest of a hill hides all but the tube and the top of the shield from the enemy. Such positions may sometimes be quickly improved by digging in the wheels. As is true when occupying all positions, the ability to cover the field of fire, particularly that part immediately in front of the gun, must be checked by boresighting.

(2) When occupation of a position immediately in rear of a topographical crest is not feasible, partial defilade may be obtained by emplacing the gun on the forward slope of the hill immediately in rear (fig. 29). Such a position frequently has the disadvantage of excessive dead space. However, it can be used for providing depth when this dead space is covered by other guns.

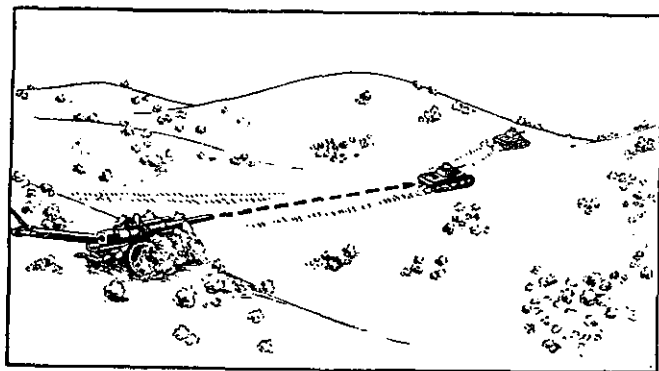
g. Reverse slope positions. A reverse slope position is one placed on a slope away from the enemy. It usually provides excellent cover and concealment from enemy small-arms and observed artillery fire. Furthermore, reverse slope positions frequently afford opportunities for surprise fire.

(1) The first type of reverse slope position, firing directly up the hill, can be used when the terrain indicates a tank approach over the crest of the hill. Tanks advancing over the crest are caught by surprise and often cannot return fire until they move down the slope a bit. In the meantime their soft undersides are exposed. However, this type of position may have an undesirably short range.

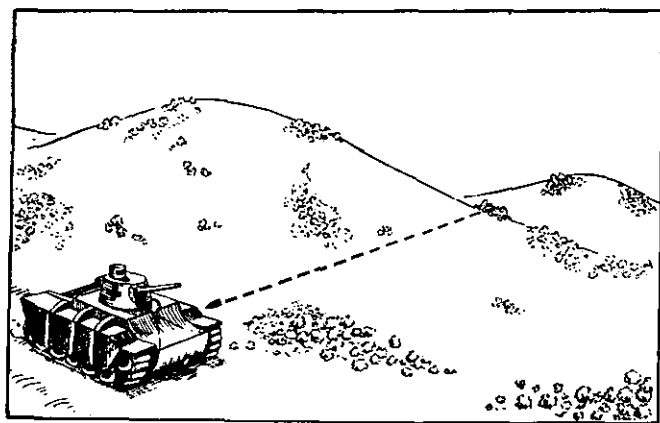
(2) The second type is the one used for fire against the enemy from his rear. It usually provides the greatest surprise possible. It is best used when friendly troops protect the gun position; the absence of covering fires might enable the enemy to overrun the position before hostile tanks come within the gun's field of fire.



①



②



③

Figure 30. Reverse slope positions.

(3) The third type is a position in which the sector of fire is to one flank of the covering hill, as illustrated in figure 30 ③ and by the locations of guns ① and ③ in figure 33. These positions are particularly advantageous because they lend themselves to flanking fire and mutual support. Also, the element of cross fire from the rear of one hill to the front of the other provides surprise fire from a well-concealed position.

29. OBSTACLES. a. Obstacles, both natural and artificial, influence the approach of hostile tanks. In addition, they will limit the enemy's maneuvers after the fire fight has begun. For these reasons they are important considerations in the selection of a gun position. Hill masses, streams, ditches, heavy woods, villages, and swamps, as well as mine fields and artificially created tank traps, can all be used to stop, delay, or force the enemy into a desired field of fire.

b. Here again the enemy's point of view should be considered. How will the obstacles influence his approach and maneuver? What can he do to avoid or overcome the obstacles? Answers will assist in determining gun positions.

c. Obstacles also restrict your own movements. Consider particularly how those to *your* flanks and rear will affect your movements to alternate and supplementary positions.

30. ROUTES (LINES) IN AND OUT. a. Concealed or covered routes leading from the immediate rear to gun positions are important factors. They permit the occupation and supply of positions without disclosing movement to the enemy.

b. Routes to alternate and supplementary positions are likewise a consideration. They should have maximum cover and concealment and should be carefully reconnoitered in anticipation of use. Pioneer work on routes in and out of position may often be required. (See par. 20a.)

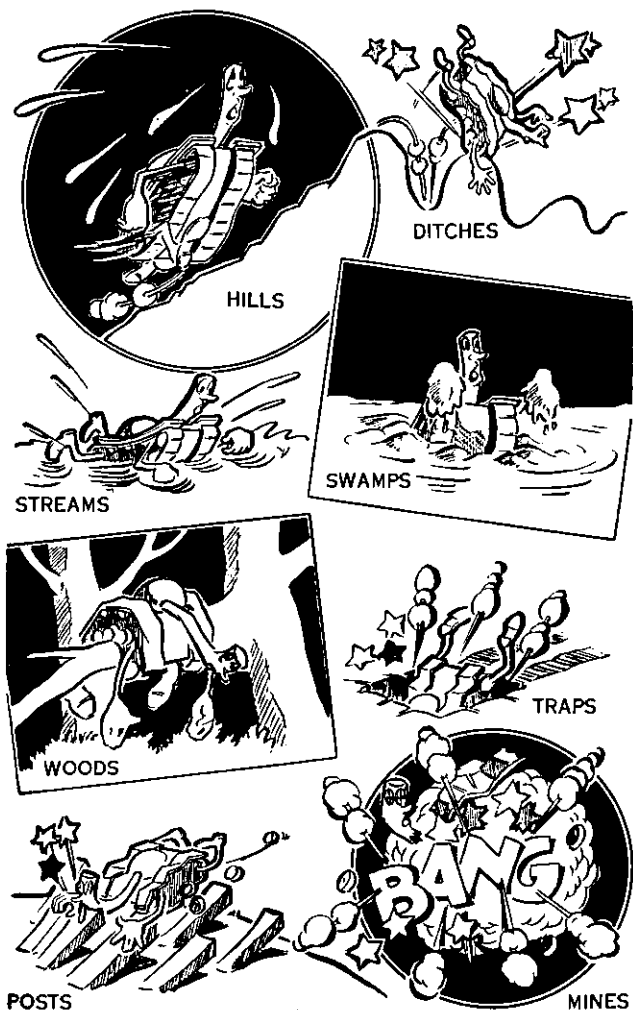


Figure 31. Obstacles.



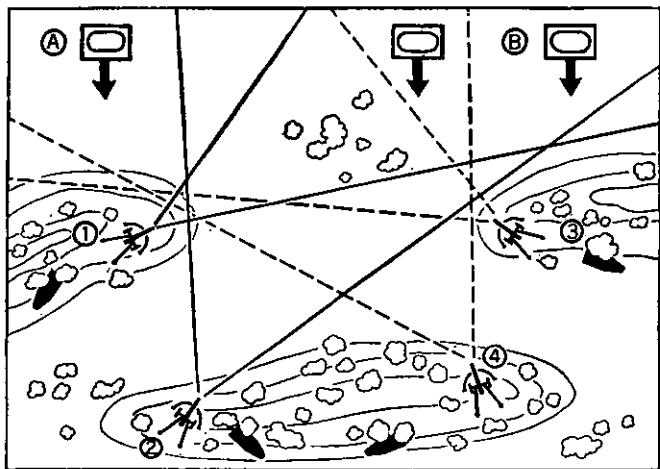
Figure 32. Routes (lines) in and out.

31. FLANKING FIRE, MUTUAL SUPPORT, DEPTH. a.

Flanking fire, mutual support, and depth are habitually sought in platoon positions. Assignments of the same sector of fire to two guns in depth is generally advisable.

b. Positions which afford *flanking fire* are most desirable because—

(1) Flanking fire surprises the enemy.



Flanking fire. Gun ① brings flanking fire against tanks approaching from B. Gun ③ shoots against the flanks of tanks at A.

Mutual support. Tanks at A can approach guns ① and ② over an area in which these guns cannot fire; guns ③ and ④ protect guns ① and ②. Likewise, tanks at B cannot be fired on by guns ③ and ④; guns ① and ② can protect guns ③ and ④.

Depth. Guns ① and ② cover the same general sector from positions in depth. Guns ③ and ④ also have depth and approximately the same sector of fire.

Most areas that are suitable for the employment of flanking fire, mutual support, and depth will not be as evident as the area illustrated. The platoon commander must study ground carefully and must use his imagination to find an excellent solution to a situation which, at first, may appear obscure.

Figure 33. *Flanking fire, mutual support, depth.*

- (2) The enemy has difficulty in locating guns to his flank.
- (3) It is difficult to maneuver against or withdraw from flanking fire.
- (4) The largest part of the tank is exposed to the fire of the tank destroyer gun.
- (5) The side armor of most tanks is lighter than the front armor.

c. Frequently a gun position will have a certain amount of dead space caused by terrain irregularities. Guns placed to cover the dead space of others are said to be in *mutual support*. Mutual support has another important aspect; since the guns are covered the same general sector, they can provide each other with covering fire during a movement.

d. Guns placed in *depth* are the best guarantee against flanking maneuver by the enemy. They also cause a hostile attack to spend itself before accomplishing a breakthrough.

32. SECURITY SECTION POSITIONS. a. **Selection.** The security section selects and occupies positions to—

- (1) Protect the platoon from hostile foot troops.
- (2) Man platoon observation posts.
- (3) Destroy with rocket launchers tanks approaching by covered routes.

b. **Reinforcement.** After the 3-inch guns are emplaced, security section positions may be reinforced by some of the cannoneers and by part of the ammunition detail.

c. **Protection from hostile foot troops.** The methods described for operation of infantry (FM 7-10) are applicable to the security section.

- (1) The machine guns are sited primarily to destroy hostile foot troops approaching the platoon area. Alternate and supplementary positions are selected as for the guns. Machine guns are sited for grazing fire and should always be dug in. The positions selected are similar to the gun positions in that flanking fire and mutual support

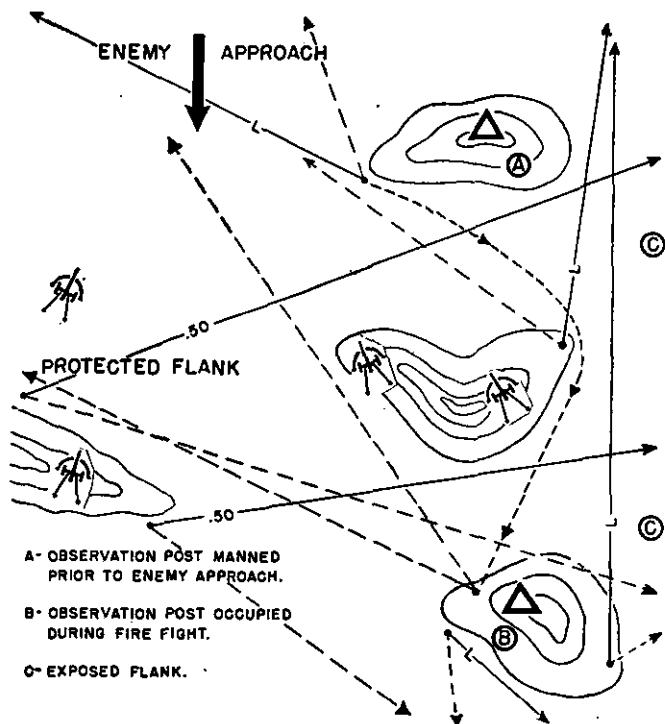


Figure 34. A security section position. The caliber .50 machine guns may remain with the vehicles or be placed on ground mounts (as shown), depending upon whether an air or infantry attack presents the greater threat.

are sought; depth may be obtained by placing the caliber .50 guns in rear of the light guns.

(2) When one or both of the platoon's flanks are exposed to attack by foot troops, the primary machine-gun positions cover the exposed flank or flanks. The 3-inch guns can discourage enemy infantry advancing within their fields of fire by firing high explosive shells, particularly by obtaining air bursts from ricochet fire. Therefore, in all

situations, the security section covers avenues of approach that cannot be covered by the 3-inch guns. When the platoon's flanks are protected, the machine guns are sited primarily to cover the front.

d. Platoon observation posts. The security section mans one or more platoon observation posts; extra men are needed for relief and to act as messengers. The OP detail might be mobile, first occupying a forward position prior to the approach of the enemy and later moving in rear or to a flank of the guns. The function of the OP is to give warning of the approach of enemy tanks, infantry, and reconnaissance units by prearranged signal.

e. Rocket-launcher positions. (1) Primary rocket-launcher positions are selected to cover ground over which the tank can closely approach the platoon area without coming under the fire of the 3-inch guns. These positions should be improved to afford both cover and concealment. (2) Because of the launcher's short range, alternate and supplementary positions are essential; they are selected and prepared in advance. Wherever possible, routes thereto should afford cover or concealment, or preferably both.

33. COOPERATION WITH INFANTRY. a. General.

Very frequently the platoon will operate in close proximity to infantry. At times, during defensive situations, the platoon may be included in an infantry company defense area; at other times it might be near infantry. When our forces are attacking, there will be instances when the platoon will join the infantry immediately after it has reached its objective or has been held up.

b. Defensive situations. (1) When there is sufficient time, the platoon commander contacts the local infantry to learn the dispositions and fire plans of nearby infantry in order to coordinate his guns with the existing fire plans. He also learns the location of mine fields and other obstacles.

(2) The locations and fields of fire of the infantry anti-tank guns obviously affect the selection of the tank destroyer gun positions; the two types of weapons should be closely coordinated in order to prevent duplication of effort or gaps in the area to be covered by antitank fires. Generally, because of their longer range, the tank destroyer guns are emplaced to the rear of the infantry antitank guns.

(3) The platoon commander should take all possible advantage of the infantry rifle, machine-gun, mortar, and cannon fires in order to protect the platoon against enemy infantry. He should site his guns in positions to give maximum support to the infantry.

(4) By contacting the local infantry commander the platoon leader ascertains the artillery and chemical fire plans that apply to the platoon's sector of fire. He particularly notes contemplated use of smoke in order to prepare plans for destroying tanks as they emerge from the smoke cloud. Movements might be made to alternate or supplementary positions while the enemy is covered with smoke; plans for these possible movements should be made in advance.

(5) Finally, in defensive situations, the platoon commander should learn the infantry commander's plans for counter-attack so that he can prepare plans for supporting fires and, at the same time, avoid taking positions that will interfere with possible friendly movements.

c. Offensive situations. (1) During the attack, tank destroyers frequently follow infantry. (See FM 18-5.) Movements are made by bounds and should be preceded by a reconnaissance of the route to the new position.

(2) When possible, the guns are emplaced in each successive position prepared to protect the infantry from hostile armored counterattacks. At other times the tank-destroyer unit occupies successive positions in readiness, prepared to move its guns to preselected firing positions.

- (3) A hostile counterattack can be expected immediately after our own forces have reached the objective or have been held up. On orders to be prepared for the counter attack, the platoon commander must expedite reconnaissance and movement into firing positions at this critical time.
- (4) When the attack has stopped, the infantry will reorganize, temporarily reverting to the defense. Coordination is effected as described in b above.

34. COORDINATION WITH OTHER TANK DESTROYERS.

a. Since the towed platoon seldom can maneuver against tanks, close coordination between tank-destroyer units must be effected. When there is time available, the battalion commander coordinates the plans of the gun companies; usually each company commander will be able to coordinate the plans and actions of his three platoons. However, the details of obtaining cooperation and coordination must be mutually arranged for by the commanders of adjacent platoons.

b. Wherever the terrain permits each gun is sited so that it has a field of fire of 360°. However, positions that afford cover, concealment, and the avoidance of "skylining" frequently provide only short fields of fire in at least one direction. Guns that can be overrun by tanks approaching through an area outside their fields of fire must be protected by other guns. The platoon commander first endeavors to site his own guns so that the platoon is self-protecting; when he needs assistance, he requests an adjacent platoon to cover the dangerous area. Likewise, he may expect to be called upon to give assistance.

35. DELIBERATE OCCUPATION OF POSITION. a. Deliberate occupation of position is preceded by thorough reconnaissance. (See sec. V.) The key personnel then are assembled for receipt of orders, preferably at a location which commands a view of the platoon area. The key word IDEALS serves as a check for the platoon com-

mander's order. (See FM 18-5 for type orders.) The order includes—

(1) I Information of the enemy and friendly troops, if not already given.

(2) D Decision, mission, or general plan of employment of the platoon.

(3) E Employment (details) of the platoon: how it is to move from its position in readiness to the firing positions; routes to be used; whether primary positions or nearby cover positions are to be occupied; primary sectors of fire and frontages to be covered; the range at which fire is to be opened; general instructions as to displacement; location of platoon OP.

(4) A Administrative details, such as location of vehicles other than prime movers, providing for extra ammunition.

(5) L Location of the platoon and company command posts.

(6) S SOI (signals), such as radio opening or silence.

b. The platoon proceeds to occupy and organize the position according to the platoon commander's order. The gun commanders see that all available natural cover and concealment are used, and add artificial camouflage where needed. Towed guns are always dug in during deliberate occupation of position. Guns are checked for maximum depression, boresighted, and working parts are cleaned and checked; range cards are prepared; maintenance of the gun and prime mover is checked. All obstacles which might interfere with traversing the guns are removed. Measures to reduce the effect of muzzle blasts are taken, and track marks are erased or covered with brush. At the first opportunity the gun commander inspects the gun position from the enemy point of view, both with respect to its field of fire and for its concealment and cover.

c. Preparations are made for firing on probable tank approaches in the event the gun positions are covered by hostile smoke. These preparations include the placing of

aiming stakes, recording quadrant elevations on range cards, and posting forward observers.

d. The platoon leader maintains a close check on ammunition and the handling of it at all times. Ammunition trenches should be dug at the rear of the gun position. Unless it is desired to keep the load on the prime movers as a reserve, they will be unloaded at the gun positions and refilled from the platoon ammunition vehicle; otherwise, the platoon ammunition vehicle drops its load at the gun positions.

e. Frequently, in a deliberate occupation, it is possible to prepare completely the alternate and supplementary gun positions. Range cards are also made for these positions.

f. While gun positions are being prepared and organized, the platoon commander checks each gun for its field of fire, coverage of its sector, dead space, mutual support, interlocking fire, and the work of the crews.

g. The prime movers are moved to a defiladed, concealed position to the rear. The distance they are separated from the guns depends upon the availability of cover and whether or not a movement is anticipated. The disposition of the vehicular machine guns depends upon which presents the greater threat—an infantry or air attack. The machine guns, therefore, are left on the vehicles or placed on ground mounts in the vicinity of the 3-inch guns, according to the situation.

h. The security section occupies its assigned positions while the gun positions are being prepared. Establishment of observation posts has first priority. Prone shelters are dug for riflemen and fox holes prepared for machine gunners.

i. When materials are available, mines are laid and barbed-wire obstacles may be constructed for the protection of the platoon after emplacements have been dug and camouflaged.

j. Plans are prepared for night combat. (For considerations affecting night action, see par. 15.)

k. When the platoon is in position, the platoon commander sends a sketch or overlay of the disposition of his platoon to the company commander.

l. Deliberate occupation and organization of position by the towed platoon should be accomplished during darkness whenever the situation permits, so that the guns can be in position, completely concealed and camouflaged, prior to daylight. Whenever it is necessary for towed units to occupy positions during daylight under enemy ground or air observation, the use of cover positions should be considered, the preparation of firing positions being held to bare essentials until dark, when work is completed and camouflaged. At times, after a daylight occupation, it will be desirable to occupy and organize entirely new positions after darkness.

m. A platoon can always improve its position, even after several days' work. Therefore, the platoon commander continuously inspects to find ways of improvement. Furthermore, he continues to maintain liaison with adjacent platoons and with other nearby friendly troops while awaiting the fire fight.

n. Gun commanders and gunners should use the catechism in FM 18-15 as a guide to check on their duties in the occupation and organization of positions. Copies, with modifications necessary for the towed gun, of the gun commander's and gunner's catechism should be posted on each gun shield. The importance of the gunner cannot be overstressed. Gunners should take pride in the fact that the entire battalion of several hundred men is organized for the sole purpose of bringing the fire of thirty-six guns against the enemy.

36. CHECK LIST FOR OCCUPATION OF POSITION. a. Reconnaissance and selection. (1) Routes from position in readiness to combat area.

(2) Avoidance of movements that disclose actions to the enemy.

- (3) Enemy capabilities on this terrain.
- (4) Study of possible positions from enemy viewpoint.
- (5) Advantages and disadvantages of all possible positions.

b. Occupation and organization. (1) Avoidance of movements that disclose actions and positions to the enemy.

- (2) Security during occupation of position.
- (3) Gun and machine-gun positions.
 - (a) Primary sectors of fire.
 - (b) Coverage of dead space.
 - (c) Mutual support.
- (4) Provisions for prearranged machine-gun fires during darkness or when covered by smoke. (See FM 23-45 and FM 23-65.)
- (5) Boresighting (3-inch guns only).
- (6) Range cards.
- (7) Alternate and supplementary positions.
- (8) Routes to alternate and supplementary positions.
- (9) Range at which fire is to open.
- (10) Cover, concealment, and camouflage (from enemy's point of view when possible).

c. Observation. (1) OP covering approaches to platoon area.

- (2) Forward OP when fields of fire are short.
- (3) Air sentinels.
- (4) Observer at each gun.
- (5) Observer with each machine gun group.

d. General. (1) Ammunition, fuel, water, rations.

- (2) Liaison with adjacent and nearby troops.
- (3) Information of enemy and friendly situation to entire platoon.

- (4) Disposition of vehicles.
- (5) Preparation for combat at night.
- (6) Plans for anticipated or probable future actions.

37. HASTY OCCUPATION OF POSITION. **a.** When the situation causes the platoon to move rapidly into a fighting position on unreconnoitered ground, the platoon com-

mander assigns general areas to his sections and causes them to take up positions with all possible speed. The platoon commander may designate these position areas by radio or visual signal, or provide guides. Positions may be only temporary; carefully selected positions will be occupied as soon as the situation permits.

b. If the platoon is caught in the open and good positions are nearby, the use of smoke or dust may permit movement to the more favorable positions.

c. Every minute is valuable for the improvement of the position. Leaders energetically execute as many of the duties of deliberate occupation as time permits. Better primary positions can often be found and should be occupied without hesitation, regardless of the extent of improvement to the first position. Coordination is effected between guns, between elements of the security section, and also with adjacent units. Personnel can dig shallow prone shelters—a 6-inch trench is far better than none at all. Camouflage can be improved. Emergetic leaders can do much in a short time if the platoon is well trained.

d. Hasty occupation of position is facilitated by the use of well-practiced combat, or extended order, formations. (See par. 7 and FM 18-15.)

e. To avoid being ruined by a surprise attack during a movement, the platoon commander should continuously study the terrain. He should ask himself, "What would I do if I should suddenly be attacked here?" Successive answers to this question will enable him to make a decision which may mean the difference between victory and defeat.

SECTION VII

THE FIRE FIGHT

38. PSYCHOLOGICAL FACTORS. **a. The test.** All training leads to the pay-off—the fire fight. It is in this phase that the platoon passes or fails the final test. Success is largely dependent upon men's confidence in themselves and in their leaders. To obtain this confidence, all leaders—platoon commander and noncommissioned officers—must be steadfast and self-composed at all times; they must be competent to make sound decisions based upon tactical and technical knowledge.

b. Avoidance of nervousness. A soldier's nervousness before combat is similar to an athlete's discomfort before a contest. Combat experience has proved that concentration on accomplishing assigned tasks will so occupy the mind that personal danger ceases to be important. Therefore, to avoid fear and nervousness, *work and fight*.

c. Initiative. When the situation is different from that anticipated, when the unexpected occurs, a poor leader is apt to do nothing. On the other hand, the real leader quickly studies the conditions, considers possible ways of improving the situation, arrives at a decision, and takes energetic measures to accomplish his mission. The good leader never quits nor does he passively await help. In the absence of orders he finds a way of carrying on the fight. To fight skillfully and effectively without detailed orders during the confusion of battle, is to show real initiative.

39. HOSTILE FOOT TROOPS. Prior to the fire fight final precautions must be taken. The enemy's capability of leading his tank attack with infantry must be considered. He will do this if he suspects a strong antitank defense. However, only the strongest of infantry attacks, supported by artillery, can make headway when positions are well-selected and well-prepared. The security section machine guns, reinforced by the machine guns from the prime movers, and the four 3-inch guns employing high explosive with ricochet fire, assisted by a few riflemen available, can stop many infantry attacks.

40. COUNTERRECONNAISSANCE. **a.** It is essential that no movement occur that will disclose the gun positions. Tank commanders usually reconnoiter for hull-down positions on foot when planning their attack. When friendly units are not covering the platoon area, an observer should be placed well forward to report any enemy reconnaissance activity.

b. Should enemy reconnaissance consist of lightly armored vehicles, the caliber .50 machine guns only should be used. The large guns will fire on these elements only as a last resort to prevent a penetration of the position. Should the positions of any guns be disclosed, they should be moved when there are prepared alternate positions available and when the movement can be made undetected by the enemy. If daytime displacements are not practical, disclosed guns should move when night comes, even if the alternate positions require digging.

41. DECEPTION. **a.** Plans for deception are made prior to the fire fight. The virtual annihilation of the enemy may be planned when an enemy tank attack will be canalized by the terrain, provided the fields of fire completely cover the approach. The platoon commander must issue strict orders for all gun commanders to fire only upon command. Then, with guns sited in depth for flanking

fire, the prearranged signal for opening fire will be given when there are one to four tanks in front of each gun.

b. (1) When obstacles do not force a canalization, the platoon commander may plan one. For example, one gun is placed so that when it opens fire, the hostile tanks will maneuver to flank it. The other guns, having withheld fire, open fire simultaneously at an opportune time.

(2) When infantry antitank guns are nearby, the platoon may withhold its fire until the tank attack has been committed against these infantry guns. Or the platoon commander may suggest to the infantry commander that the infantry guns remain silent until the tanks concentrate on the 3-inch guns.

(3) Deception may be based upon the simulated fire of dummy guns. (See FM 18-24 when published.)

(4) Actions of the enemy may provide an opportunity for deception. For example, in one case, the enemy's nightly efforts to clear a gap through a mine field apparently escaped detection. Actually, the enemy's actions were discovered; several guns were moved to hidden positions near the mine field; the enemy tanks were destroyed when they came through the gap.

c. By studying conditions and by the use of imagination a platoon commander may find other ways of obtaining deception.

42. OPENING FIRE. a. *In a defensive position it is essential that tank destroyers do not disclose the position of troops by premature opening of fire.* Therefore, the tank destroyer commander will carefully coordinate his fire plan with that of the unit he is supporting and will call upon the supported unit commander for instructions as to what ranges fire will be opened.

b. Upon the appearance of tanks within effective range, fire usually is delivered in the following order of priority: tanks threatening gun positions; covering tanks (halted); and tanks nearest cover. In the majority of cases, fire will

not be opened until the target is at a range of 1,000 yards or closer.

c. The platoon commander should control the time of opening fire unless tanks appear closer than 600 yards. Other factors which control the time of opening fire are: number of hostile vehicles which are exposed; the degree of concealment afforded the gun; proximity of cover to which the target might resort; the extent to which the terrain favors machine-gun fire from a moving tank; and the tactical plan which the platoon leader has in mind. The platoon commander commits only the number of guns required to deal with the number of tanks seen. Thus, in his order for opening fire, he may assign one gun the covering tanks and another the maneuvering tanks. As more tanks appear, he will commit more guns to the fire fight.

d. In case large numbers of tanks appear suddenly, necessitating that all guns open fire, a prearranged plan should be followed. One suggested method is for the right gun to engage the left flank of the formation, the left gun to engage the right flank, the right center gun to engage the left center tanks, and the left center gun the right center tanks. This provides cross and flanking fire to a greater extent than if each gun engaged tanks directly to its front.

43. CONTROL. During an engagement the platoon commander should place himself in a position from which he can observe his platoon sector and all his guns. By the use of radio, he can communicate with and control his entire platoon. The radio may be left in the vehicle if it is possible to conceal the truck. The platoon sergeant should act as an executive to function in the platoon commander's absence, or in case he becomes a casualty.

44. MOVEMENTS AND WITHDRAWALS. a. The enemy frequently executes reconnaissance in force for the purpose of determining our dispositions and gun locations. Also, when one of his attacks fails, he is likely to make another

attack over the same ground, profiting by the knowledge gained during the first attack. Therefore, whenever possible, a gun crew that has disclosed its primary position should move to an alternate position at the first opportunity. Often the movement cannot be made until dark because the towed gun is very vulnerable during movement. Such movements can be executed during daytime lulls only when the enemy is unable to bring direct or observed indirect fire upon the position.

b. Movements to alternate and supplementary positions and withdrawals are facilitated by the use of smoke. Smoke laid on the enemy is more effective than a screen placed in front of your own guns. Therefore, when smoke shells are available, the enemy positions should be screened.

c. When the soil is very dry and loose, and when there is a light wind, high explosive ammunition will raise an effective dust cloud in front of the enemy. Always lay the smoke or dust screen upwind from the enemy target. When the enemy cannot be screened, platoon movements may be concealed with smoke candles.

d. During large-scale actions, the platoon cannot use smoke indiscriminately. Smoke placed on the enemy might obscure the enemy from the observed fire of other units. Candle smoke used to hide a platoon movement can blind adjacent troops. Therefore, the platoon commander will order the use of smoke only when its use is coordinated, or when it is apparent that smoke will not interfere with the actions of other troops.

e. The platoon will withdraw from its assigned area of responsibility *only* on orders from the headquarters which assigned its original mission. Withdrawal is habitually made at night. In order to do this, it may be necessary to fight against overwhelming odds until dark. The losses in such an event usually will not be as great as those which would result during a withdrawal in daylight. Before a withdrawal is started, all friendly units in the vicinity should be informed of the intention and the plan

for its execution. In the unusual event of a daytime withdrawal, the maneuver will be executed by leapfrog sections or platoons to the rear. The platoon operating independently will withdraw one section to the next terrain feature within range, while the other section covers its withdrawal. Then when in position and ready to fire, the section in the rear covers the withdrawal of the forward section. If this maneuver is executed under company control, one platoon may cover the withdrawal of the other two in a similar manner.

45. REORGANIZATION. a. Immediately following each phase of the fire fight, the platoon leader reorganizes his unit, usually without moving from the platoon area. He takes positive steps to eliminate the confusion inherent to battle and, in the absence of instructions to the contrary, prepares his platoon for further fighting in the same area. After determining that the platoon security, particularly observation, is still functioning so that reorganization can proceed in safety, he takes an inventory of the effects of the fire fight upon the platoon. Gun commanders and the security sergeant report their situations to him regarding casualties, ammunition supply, and damage to vehicles and weapons.

b. The platoon leader then sends a consolidated report together with the enemy situation to the company commander. He then provides for—

- (1) First aid and the evacuation of the wounded.
- (2) Readjustments due to casualties.
- (3) Ammunition replenishment.
- (4) Disposition of damaged vehicles and guns.

c. Generally, the wounded are given immediate first aid, and those who must be evacuated are moved to a covered position a short distance to the rear, where they can wait for a forward area ambulance or other transportation. (For details, see FM 21-11 and FM 18-5.)

d. Readjustments due to casualties are made so that each gun has sufficient personnel for operation, and none of the areas assigned to the security section are left uncovered. The platoon leader makes adjustments in sectors of fire or gun positions as necessitated by guns being put out of action.

e. Movement to *alternate positions* may be made. In particular, when movement during daylight is not practical, guns that disclosed their positions by fire are moved during darkness.

f. Damaged vehicles incapable of moving are usually towed to a cover position in rear where they await mechanics from the company maintenance section or battalion maintenance platoon. Should prime movers be immobilized or destroyed, guns may be moved by other vehicles.

g. Ammunition supply is maintained by sending the platoon ammunition vehicle to the rear for reloading, by delivery to the platoon area by company or battalion vehicles, or by a combination of the two methods. Occasionally, during defensive situations, a small platoon ammunition dump may be established. Besides obtaining ammunition from the rear, the platoon commander improves the status of ammunition by equalizing the amount between guns and by removing ammunition from disabled vehicles before they are evacuated.

h. During a reorganization, time and the situation permitting, the platoon leader visits each gun position and the security section. He can thus best inform himself of the details of the condition of the platoon and the needs of the men; his presence also will have a stabilizing effect upon the members of the platoon. As soon as the platoon reorganization is under way, the platoon commander should contact adjacent unit commanders in order to coordinate change of plans.

i. Noncommissioned officers are trained to report the situation in their units immediately after the fire fight and

to proceed with the reorganization of their units on their own initiative.

j. Constructive activity and purposeful action during reorganization aid in breaking tension. This activity reduces to a minimum the unsettling effects of exultation due to success, or of depression caused by casualties in the fire fight.

k. Reorganization, like everything else, must be practiced. Its execution cannot depend on battlefield inspiration. In unit training and on maneuvers, casualties of key personnel and of matériel should be simulated. Reorganization training under disorganized and difficult conditions should be stressed.

SECTION VIII

SEPARATE MISSIONS

46. GENERAL. a. The platoon at times will be assigned missions which call for more or less independent action. Examples of such missions are advance guard, flank guard, rear guard, and outpost.

b. The fundamental types of formations and methods of combat are generally the same, regardless of whether the platoon is alone or operating with other troops. The platoon is more vulnerable when alone, and therefore security measures must be more complete.

c. Movements of the platoon are best executed by bounds when alone in the vicinity of the enemy. Such movements, skillfully executed, will lessen, and possibly obviate, casualties caused by an enemy in ambush.

d. When the troops in rear of the platoon must move rapidly to arrive at their destination on time, the platoon cannot take the time required for movement by bounds. In this situation, the platoon protects itself from ambush by extended forward and lateral dispersion, reconnaissance being furnished by widely dispersed security vehicles well out to the front.

47. ADVANCE GUARD. a. Suitable advance guard formations are shown in figure 7. If a reconnaissance platoon is available, it may be added to the towed platoon. A small advance guard usually consists of a *point* and an

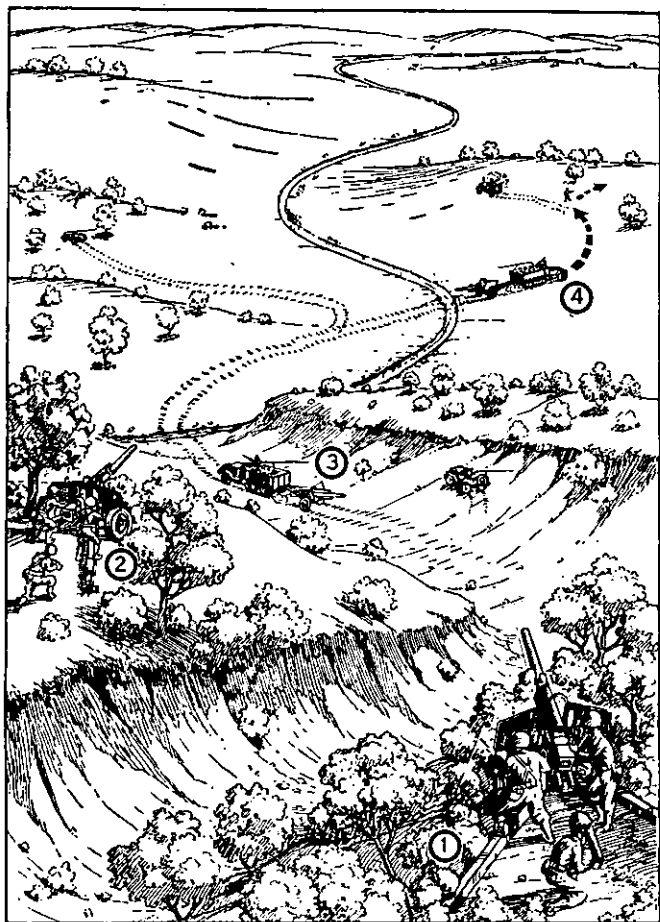


Figure 35. Movement by bounds. Guns ① and ② are first covering the advance of part of the security to a crest. After the crest and the ground to its front are reported clear of the enemy, guns ③ and ④ move forward, covered by guns ① and ②.

advance party. Due to the vulnerability of towed units in movements, the point should consist of two or three vehicles. For example, when a platoon is the advance guard for the company, two or three $\frac{1}{4}$ -ton vehicles may be the point, and the rest of the platoon the advance party. It may be advisable in some situations to augment the advance guard with security vehicles from other platoons in order to give the towed guns an ample screen.

b. Larger advance guards have a *support*. For example, when a company is an advance guard for a battalion, the platoon might form the advance party and point, the rest of the company being the support.

c. Advance guards are deployed in width, as well as extended in column when space permits. When near the enemy, unless the situation demands the utmost rapidity of movement, the advance guard moves by bounds from one covered position to another. Connecting files are used at all times.

d. The main mission of a tank destroyer advance guard is to keep the *main body* (the bulk of the troops) from being surprised. Another mission is to keep small bodies of the enemy from delaying the march of the main body. These two missions are accomplished by—

- (1) Investigation of possible enemy positions within direct fire range.
- (2) Attacking by fire any enemy encountered to drive him away if he is weak, or to make him disclose his strength and disposition if he is strong.

48. PLATOON AS PART OF AN INFANTRY ADVANCE GUARD. The platoon may be part of an advance guard composed principally of infantry. In such a situation, the conduct and actions of the platoon will depend on the mission assigned by the advance guard commander. Usually the platoon will be part of the support. The location in the column and the method of advance—whether by bounds, in column on the road, or in open formations—will depend

on the actions of the remainder of the advance guard. Because of the difference in rates of march and the inadvisability of mixing vehicles with marching foot troops, the platoon would not normally march within the column of a dismounted infantry advance guard. It may better proceed by bounds on the down wind side of the infantry.

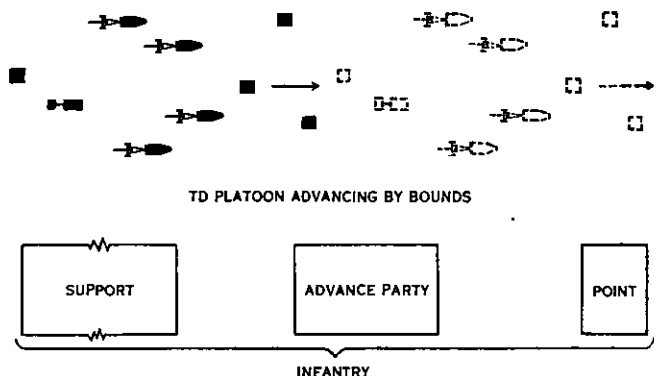


Figure 36. Platoon with infantry advance guard.

49. FLANK GUARD. a. The mission of a flank guard is similar to that of an advance guard, differing in that it protects a marching column against flank attacks. The execution of its mission accordingly will vary.

b. There are two ways in which flank guards provide protection:

- (1) Marching on parallel routes.
- (2) Movement by bounds or leapfrogging to cover successive approaches by which the enemy can advance.

c. When the ground to a flank is open so that enemy tanks can approach at any place, a flank guard marches parallel to the main body. Any dispersed formation, except line, is suitable. Due to the vulnerability of towed guns in movement, security will depend upon early information of the enemy. The security section of the platoon moves as a

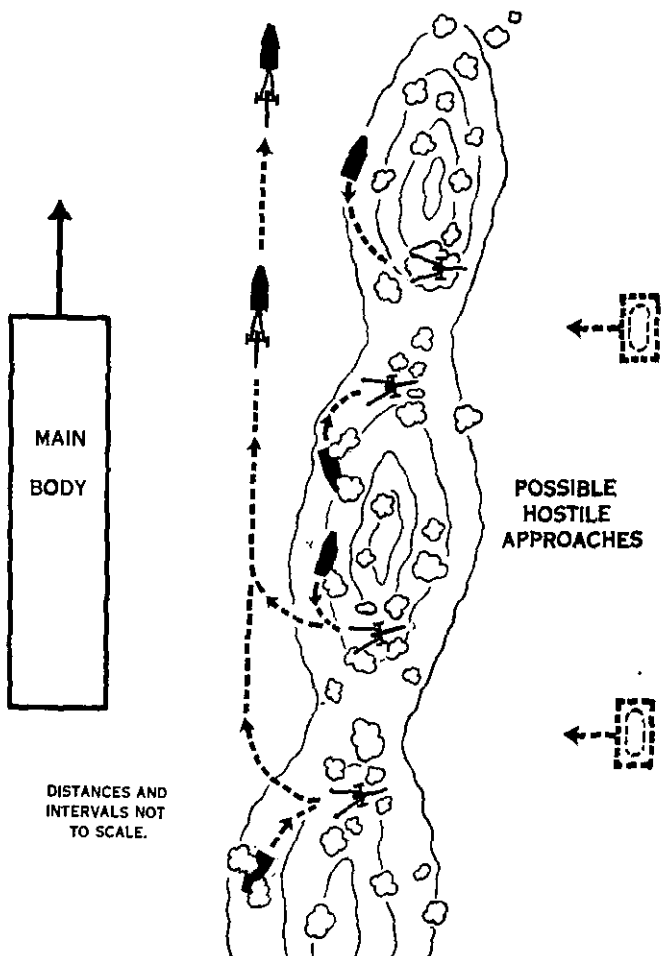


Figure 37. Sections leapfrogging from position in order to cover possible hostile approaches.

reconnaissance element to give early warning of the approach of enemy tanks. It will move from one OP to another in order to keep the platoon commander informed of any hostile approaches.

d. In close country, where enemy approaches to the main body are canalized by terrain features along the route of march, the platoon moves by section bounds. One section emplaces its guns to cover the approach while the main body is passing. At the same time, the other section moves ahead to cover the next possible hostile approach along the route of march.

50. REAR GUARD. a. A rear guard formation is similar to a reversed advanced guard. The last element is the *rear point*. The next to last element is the *rear party*. Ahead of the rear party in larger rear guards is the *support*.

b. During retrograde movements (movements away from the enemy), when there are no friendly troops between the tank destroyer unit and the enemy, the rear guard will be large. In such an instance, the platoon would fight a series of delaying actions from successive delaying positions. While the platoon, and possibly the company, holds the enemy at one delaying position, another platoon or company will be occupying another delaying position in the rear. The enemy will be held until a certain designated time; the platoon then will withdraw, passing through or around the unit in rear to occupy another delaying position.

c. A good delaying position is one which affords long fields of fire and a covered route for withdrawal. Road blocks, mine fields, and other obstacles in the field of fire strengthen a delaying position. It is organized the same as any other platoon firing position except that depth may be sacrificed in order to provide long-range fields of fire for all guns.

d. Fire may be opened at long range to cause the enemy maximum delay.

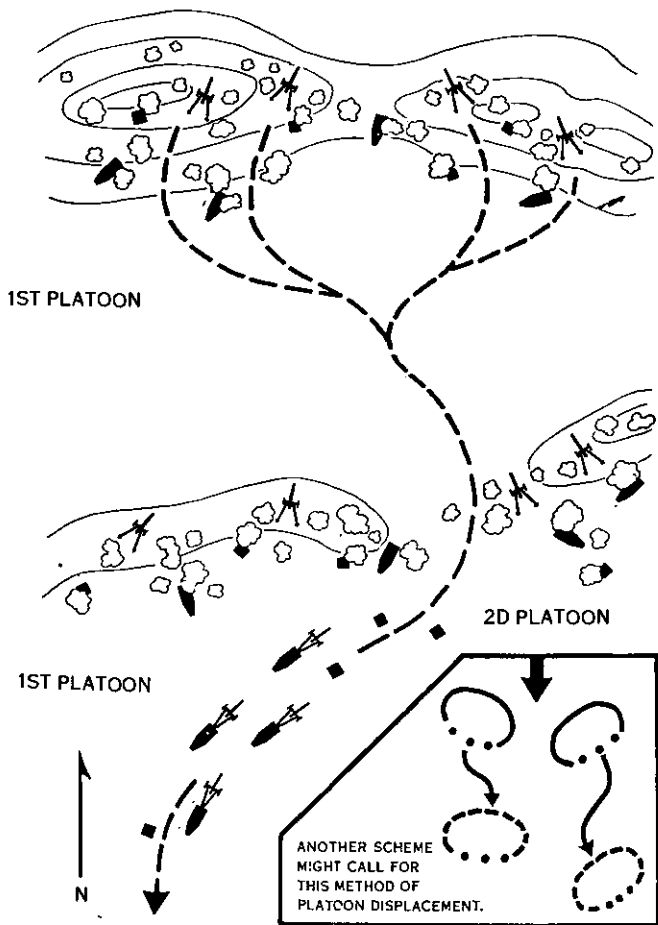


Figure 38. Platoon leapfrogging to rear. (Security section not shown.) The 1st platoon has withdrawn from the north hill and has passed through the 2d platoon holding the south hill.

e. Withdrawals are made on order from the company commander or at a certain specified time. The entire platoon should not move out at once; withdrawals should be by section or by individual guns. To coordinate withdrawals, close liaison is maintained with all nearby troops.

f. Ruses or tricks have great value. For example, one gun could be kept silent and well concealed during the fire fight. After the rest of the platoon has withdrawn, this hidden gun could open fire to destroy enemy tanks.

g. At least one vehicle of the platoon, preferably a $\frac{1}{4}$ -ton, should maintain contact with the enemy until the platoon is covered by other troops.

h. During general withdrawals, gaps must be located and marked in order to enable the platoon to avoid mines and booby traps laid by other friendly troops.

51. OUTPOSTS. a. A platoon sometimes mans a strong outpost covering an approach by which the enemy might move to attack troops in bivouac, or in a position of readiness, or while preparing a defensive position.

b. The factors that are covered by the key word FOCOL (see par. 25) govern the selection of outpost positions. Observation is particularly important to prevent the outpost from being surprised.

c. Most approaches cannot be covered by day and by night from the same position. Previously selected night positions are occupied immediately after dark. (For a description of the factors to be considered in selecting night positions, see par. 15.) Just prior to dawn, daytime positions are reoccupied. Observation at night is provided by listening posts placed well forward; the approach of the enemy is signaled by prearranged flares, a system of shots, or other signals.

d. A schedule of reliefs must be arranged for rest and for feeding. A failure to provide or use such a schedule results in the men becoming so unduly tired that they might fail to function properly in event of an enemy attack.

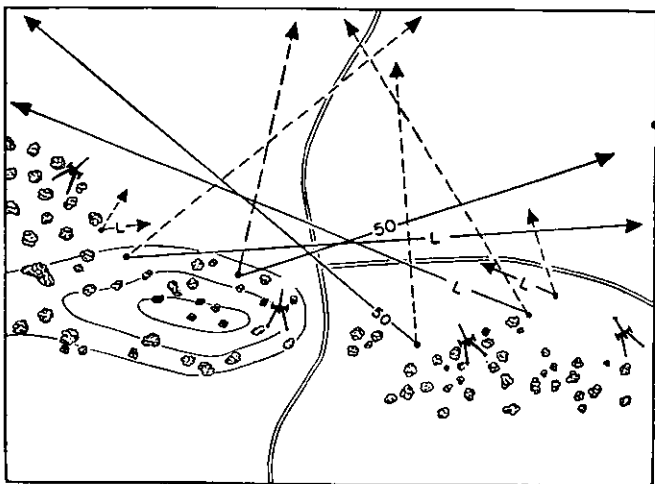


Figure 39. Day outpost position.

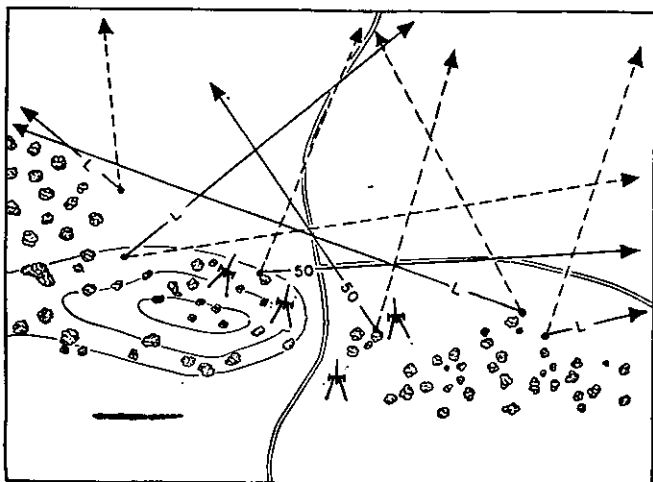


Figure 40. Night outpost position.

SECTION IX

SECONDARY MISSIONS

52. GENERAL. *a.* When the platoon engages tanks, it is employed on the tank destroyer *primary* mission. Other missions, such as augmenting artillery fires, direct fire against emplacements, beach defense, etc., are known as *secondary* missions.

b. The platoon will be employed many times in the execution of secondary missions. These missions are described in subsequent pages and in FM 18-5.

53. REINFORCING ARTILLERY. *a. Mission.* (1) Tank destroyers acting as field artillery will perform the role traditionally filled by reinforcing artillery, that is, fire the scheduled or prearranged fires asked for by the reinforced artillery. The fire unit is the platoon which corresponds to the field artillery battery. Firing data are furnished the platoon commander by company headquarters. Wire communication between platoon and company will normally be used when executing indirect fire missions.

(2) The general location of the platoon position will be indicated by the company commander. The platoon commander also will be assigned targets and informed of the minimum ranges to be used. The mission of the platoon is to deliver effective fire on the prescribed targets. To accomplish this—

(*a*) A personal reconnaissance to select exact gun positions will be made.

(b) The occupation and organization of gun positions will be planned and executed. (See FM 18-30 (when published).)

(c) Fire missions will be executed as directed.

b. Reconnaissance and selection of positions. Indirect fire positions will be selected by a consideration of the following:

(1) **MISSION** (range and direction of fire). Guns must be located so that they can clear hills to the front (mask) and, at the same time, be able to fire at the minimum range which the mission requires. Furthermore, the position must be within range of the most distant assigned target.

(2) **ROUTES IN AND OUT.** Routes in and out of position should follow existing roads or trails. The creation of new paths or trails is likely to disclose the positions of the platoon and other troops. Movements should follow the existing traffic plan. Routes are required for transporting supplies to the position. The platoon must be able to move out quickly, without interfering with other units, should its mission be changed.

(3) **ALTERNATE AND SUPPLEMENTARY POSITIONS.** Hostile counterbattery fires at times will necessitate a sudden movement to an alternate position. Supplementary direct-fire positions should be selected for occupation in event of an enemy tank attack. The original reconnaissance should include the selection of such positions.

(4) **SOIL.** Guns usually will be dug in; they should not be placed on hard, rocky soil where digging will be difficult.

(5) **SECURITY.** The position selected should provide cover against enemy direct fire and observation of muzzle flashes. Natural foliage is sought for concealment. If the entire assigned area is in the open, select a position in which artificial camouflage will blend with the surroundings. Avoid prominent terrain features which might become ene-

my artillery registration points. Also avoid single and small clumps of trees and points of woods. Disperse guns in order to reduce losses from enemy artillery and air attack. Dispersion in depth will provide better all around defense in case of a surprise tank attack. Vehicles should be parked where enemy fire placed on the position will not hit them.

c. Occupation and organization of positions. (1) Indirect fire positions are occupied as ordered by higher authority. Occupation will usually take place during darkness; therefore, a competent guide should be provided to lead each gun to its position.

(2) Guns are laid, ready to fire. Positions are camouflaged and gun pits dug before daylight. The security section outposts the position, following the same general principles as for direct fire positions. Gas and air warning sentinels are posted. Energetic measures are taken at the earliest possible moment to conceal all evidences of the occupation of the position.

(3) Normal dispersion of the four guns of the platoon will require special measures for effective control by the platoon commander. This must be a matter of prior planning and ingenuity if no communication system is provided between the platoon commander (battery executive) and the guns. Some possible measures are:

(a) Megaphones.

(b) Sound-powered or battery telephones on a party line.

(c) Vehicular radios when silence is not ordered and when channels and frequencies permit.

(4) Normally ammunition supply will not be the responsibility of the platoon commander. Tank destroyer basic ammunition loads remain intact. The battalion ammunition train, having dumped its organic load in the position area, will usually provide the ammunition for extended indirect fire missions. When the employment of tank destroyers in a secondary role cannot be anticipated sufficiently far in advance to permit this arrangement, higher

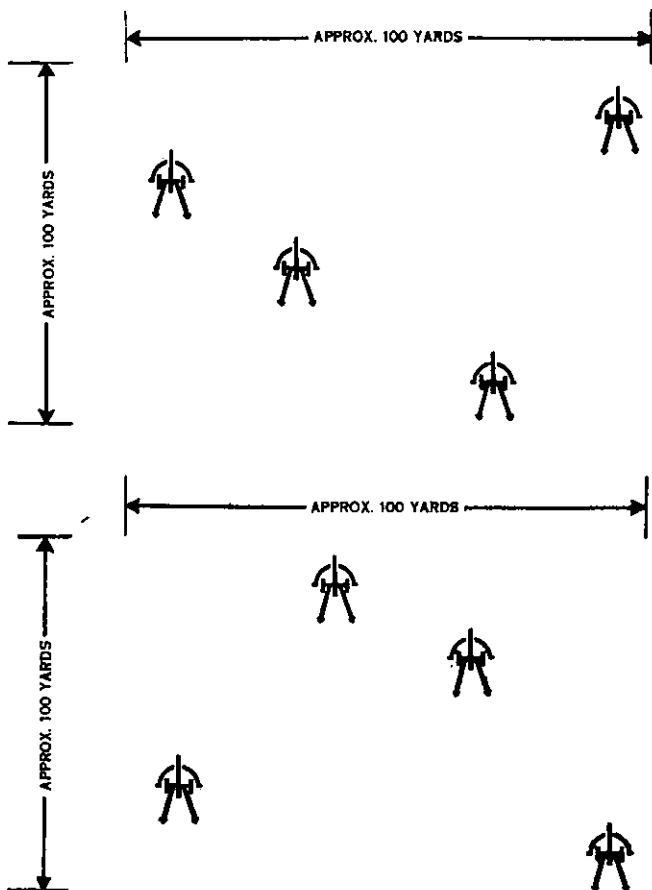


Figure 41. Platoon indirect fire positions.

NOTE. The two rear guns cannot fire directly over the forward guns except at extreme ranges. Therefore, alternate positions (not shown) are selected and prepared for occupation for the rear guns in order that shooting over the forward guns can be avoided.

headquarters may allot sufficient transportation from other sources.

d. Delivery of fire. (1) The platoon leader is responsible for the fire of his platoon in executing fire commands and in performing fire missions. To obtain accurate prearranged fires, the artillery will provide target area survey. Position area survey will be tied into convenient place marks, these place marks being established by the artillery. The field artillery will execute fire direction by designating targets, time of firing, and number of rounds to be fired. Data for these fires will be computed by company headquarters; these data may reach the platoon in the form of a prearranged data card; the accurate delivery of the fires therein is the responsibility of the platoon commander.

(2) On occasion, the platoon may deliver observed fires based on data received from the artillery, or on sensings received from observers using forward observer methods.

(3) The platoon commander may be ordered to use his platoon for the delivery of indirect fire against targets of opportunity, adjusting and conducting fire from an observation post, using forward observer methods. He provides his own observer and his own executive at the gun positions (himself or a qualified noncommissioned officer) and his own radio communication.

(4) For registration, axial percussion precision methods may be used.

(5) For the technique of conducting indirect fire, see FM 18-30 (when published).

54. DIRECT FIRE—SECONDARY MISSIONS. Very likely there will be times when the platoon will have the opportunity to engage targets besides tanks with direct fire. Possible direct fire missions are:

- (1) Augmenting the fire power of armored units.
- (2) Supporting infantry in the attack.
- (3) Beach defense.
- (4) Assault of fortified positions.

55. AUGMENTING FIRE POWER OF ARMORED UNITS.

a. The primary mission of towed tank destroyers with armored forces is to reinforce the antitank front established by the infantry and the artillery of the division. However, when the enemy is incapable of executing an armored counterattack from a flank, tank destroyers may follow one of the leading tank or infantry battalions. Movements are made by bounds from the cover of one terrain feature to the next. Gun positions are reconnoitered and selected at each halt. When the friendly units ahead meet resistance from enemy tanks or antitank guns, the platoon moves into firing position. This movement into position will be covered by the fire of friendly weapons and usually by the dust and smoke of battle. Once in position, the platoon will form part of a base of fire in support of the attack. (A base of fire is the fire of a number of weapons in stationary positions that support the maneuver of friendly forces.)

b. The platoon commander maintains close liaison with nearby tank units so that he can anticipate their movements; since his platoon cannot move as rapidly as can the tanks, he must be careful to avoid being left alone.

56. SUPPORT OF ATTACKING INFANTRY. **a.** The 3-inch gun may be used for the close support of attacking infantry. The platoon may be assigned such a mission when there is no immediate tank threat.

b. If the platoon is attached to an infantry unit, the platoon commander should report to the infantry commander upon attachment to learn the details of the contemplated action. Next, he reconnoiters the zone of advance by a map study and by personal observation as far forward as possible, and selects a route for his platoon to move to the vicinity of the line of departure as well as tentative routes forward. The platoon commander should be prepared to recommend a method of employment to the infantry commander.

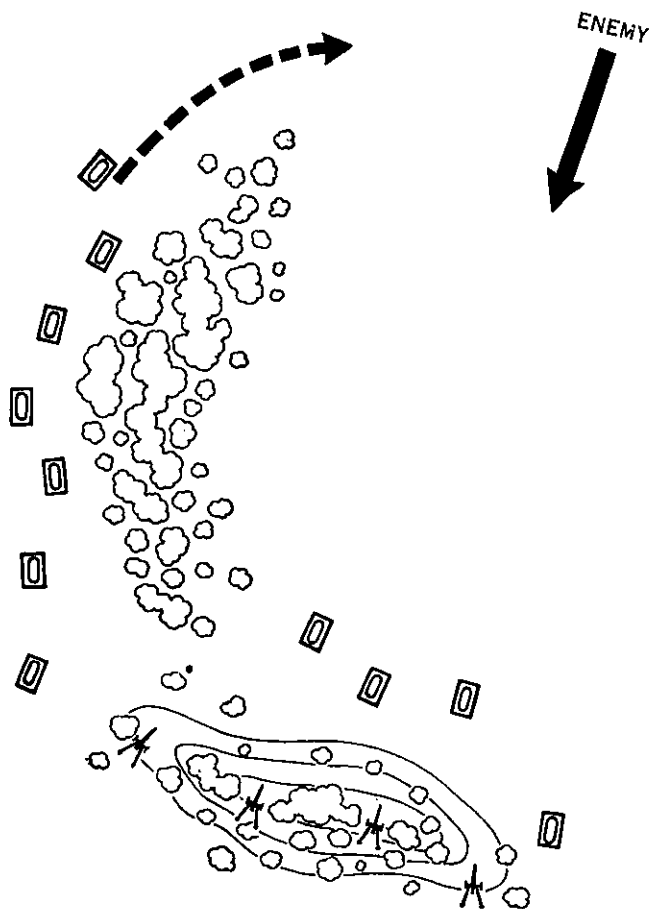


Figure 42. Base of fire. Guns in firing position to support tank attack.

c. The platoon supports the attack by direct fire from successive, carefully selected positions. At the start of the attack, the platoon moves to the vicinity of a position from which it can bring direct fire against emplaced enemy weapons. The position should be on high ground, preferably within 1,500 yards of the hostile defense area. The guns remain in nearby cover positions while the platoon commander, assisted by one or more noncommissioned officers, observes for weapons that are delaying the advance of the infantry.

d. When a target is found by observation or by reports from the infantry, the platoon commander assigns the target to one or both gun sections, depending on its nature. When the gun commander has located the target, he quietly moves his gun to a position affording the maximum available cover and concealment; this movement is usually made by hand. When the target is destroyed, he either engages another or returns to his cover position. The platoon commander uses variations when assigning targets; for example, four guns may occupy firing positions; two open fire and move to cover when fire is returned against them; the other two then destroy the target.

e. When the enemy positions within effective range have been reached by the infantry, the platoon moves forward to cover positions near new firing positions. Movement usually is best executed by section bounds, the rear section covering the advance of the other.

f. When the zone in which the platoon operates is so wide that the guns must be separated to reach all possible targets, the platoon may be divided. The platoon commander may directly control one section while the platoon sergeant commands the other. Lone sections displace forward by gun bounds.

g. The platoon and gun commanders must understand the trajectory of the projectile, in order to avoid firing into friendly infantry. Since the trajectory is very flat, a small error in laying for range might cause the projectile

to fall far short when firing over nearly level ground. When firing over friendly troops and when the range to the target cannot be accurately determined, the first round should be an "over"; adjustment is made by creeping backward to the target.

h. All possible liaison and observation is maintained in order to determine the location of friendly troops. At all times, care must be taken to avoid mistaking friendly for enemy troops.

i. At all times, the platoon must be alert to revert to its primary mission in the event of a surprise enemy armored counterattack.

57. DEFENSE OF BEACHES. **a.** Tank destroyer platoons assigned to defense of beaches will comprise a part of a coordinated system of defense involving combined arms. Positions, specific missions, and defense measures will be directed by the local commander.

b. Platoons may occupy firing positions, prepared to move rapidly to other positions upon orders, or may be held in readiness for the occupation of any one of several previously selected positions. Routes are carefully reconnoitered, and the platoon should practice day and night movements to assigned positions.

c. Alternate, supplementary, and dummy positions are selected and prepared.

d. Guns should be sited in pairs. Usually they should be near water level in order to make maximum use of their flat trajectories; the desirability of low positions frequently will cause the gun positions to be close to the beach. Low positions are particularly desirable for fire against waterborne targets because they cause "shorts" to ricochet frequently into the target. Because landings are often preceded by intensive naval bombardments, cover positions well back of the beach usually are occupied initially when the terrain permits. Movement to firing positions is made before the hostile landing craft come within range.

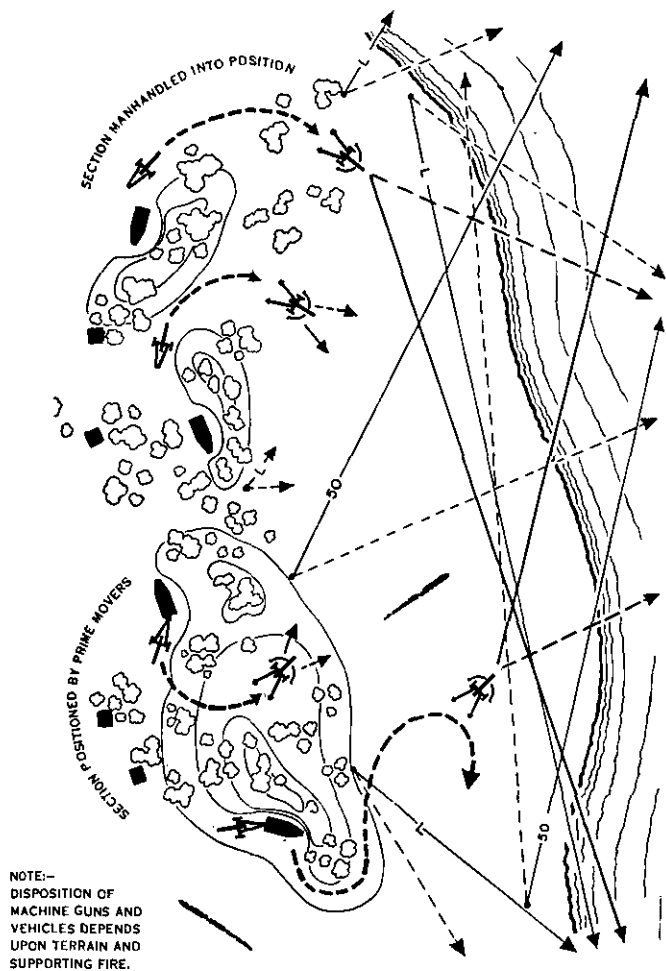


Figure 43. Beach defense positions. (Cover positions for security section not shown.)

e. Security sections are located to assist in observation, to place machine-gun fire on the less heavily armored sides of landing craft, and to destroy any enemy infantry gaining the beaches. They also should occupy cover positions.

f. The platoon might be assigned a mission of destroying enemy troops who have effected a landing on one or more beaches. This mission can be accomplished by either direct or indirect fire from previously selected positions well back from the assigned beach or beaches. Range cards for direct fire and data for indirect fire are prepared well in advance.

58. ASSAULT OF FORTIFIED POSITIONS. a. The successful assault of a fortified position held by a determined enemy requires the coordinated actions of a force of different arms. Field artillery fire will be placed on the area to be assaulted to destroy or pin down the enemy, to make shell holes that afford cover for the advancing infantry and engineers, to destroy barbed-wire obstacles, and to uncover the camouflage on concrete fortifications. Direct fire will be directed at embrasures to prevent return fire from the fortifications; high-velocity guns will destroy the concrete and steel emplacements. Infantry and engineers will advance under cover of these fires to seize and occupy the enemy defense area.

b. Towed tank destroyer guns are well adapted for the destruction of permanent fortifications.

c. Assault plans will vary with different situations. The following plan and actions can be used as a guide:

(1) The platoon is assigned one or two primary targets and an area from which to engage these targets. Secondary targets also will be assigned. These secondary targets will have been assigned primarily to another platoon. Each platoon may shift to the aid of the other after its primary mission has been accomplished.

(2) Since the position area will be 1,000 to 1,500 yards from the fortification, reconnaissance will be difficult.

The platoon commander should reconnoiter the platoon area 1 or more days before the assault; during, or after, his reconnaissance he contacts commanders of nearby troops in order to arrange for coordination. He carefully determines the ranges from each position to each assigned target. After the platoon commander has completed his plans, the situation and mission are explained to the platoon sergeant and gun commanders. If possible, they are taken to the position area where the gun positions and targets are pointed out to them. The plans are then explained to all of the gun crews. A terrain plot picturing the ground over which the action will be fought should be used during the explanation, especially when rehearsals are not held. (See f below.)

(3) Personnel of the platoon prepare dug-in emplacements for the four guns under cover of darkness, fog, or smoke. The digging may require two or three nights. During the digging-in process, positions should be camouflaged to prevent them from being located by aerial or ground observation. At the same time, other troops will be digging actual and dummy emplacements.

(4) The guns usually are emplaced and camouflaged before dawn of the day of the attack. The prime movers are placed in covered, concealed positions, while the security section vehicles remain in a rear area unless they are needed to transport extra ammunition. At a pre-arranged time shortly after dawn, fire will be opened against the designated targets. Ten to twenty, or possibly more, hits are needed to destroy the average bunker. (Six to twelve rounds, striking near the same point, will penetrate 5 feet of reinforced concrete.) Since both the platoon and the enemy positions will be covered with dust or smoke, or both, provisions should be made to continue accurate fire after observation from the gun is obscured. A method for continuing fire is as follows:

(a) The gun commander posts himself up wind from the gun.

(b) In the meantime, the gunner has laid on the target. The quadrant elevation is recorded. An aiming stake is placed in line with the direct fire sight, and deflection is also recorded by laying on a rear aiming point with the panoramic sight.

(c) The gunner fires and the observer gives the necessary order for adjustment; for example, RIGHT TWO (mils), UP ONE (mil). (Because of the precision required, changes in elevation are given in mils instead of yards.)

(d) The gunner adjusts the piece by obtaining direction from the aiming stake or panoramic sight and elevation by quadrant. (The panoramic sight usually provides the more accurate laying.)

(e) When the range is greater than 1,000 yards, observation is best conducted from a forward position. If telephones are available, the forward observer should have wire communication with his gun. The wire should be buried along a defiladed route in order to lessen the chance of its being cut by fire. Extra radios should be procured to furnish alternate means of communication between each gun and its forward observer.

(5) After the primary targets are destroyed, the guns may be shifted to the secondary targets when visibility permits. Following the destruction of the fortifications, the guns may remain in position or may move forward to support the foot troops.

d. All or part of the platoon may be called upon to lay smoke on the enemy at certain specified times and locations. The platoon will not use smoke unless directed, because the necessity for observation requires coordination of the use of this agency.

e. When the situation prevents the guns from being dug in within range of the assigned targets, the guns will follow closely the leading infantry elements until they arrive at predetermined firing positions. They should occupy positions behind the best cover available to engage their tar-

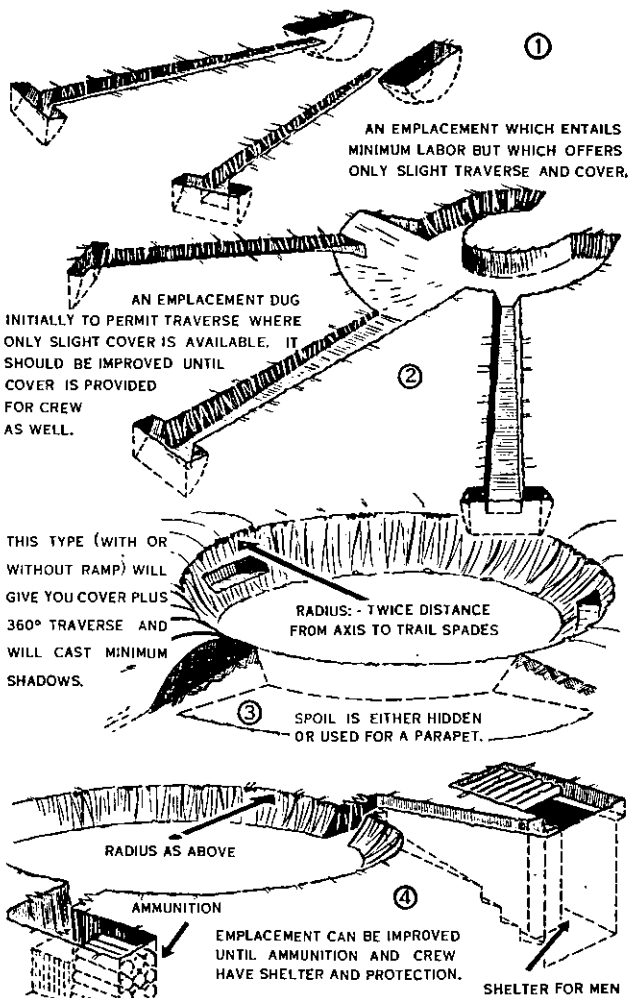


Figure 44. Prepared gun positions.

gets. Reconnaissance by the platoon commander usually will be limited to a map study, augmented by observation from a vantage point overlooking the platoon's assigned area. Explanation of the situation and planned action should be presented to all personnel on a carefully modeled terrain plot.

f. The success of an assault depends largely upon careful preplanning and the coordinated actions of all participating troops. When practicable, assaults are rehearsed over rear area terrain which closely resembles the area over which the actual assault is to be made. In the absence of a rehearsal, the platoon commander must learn the parts to be played by the other troops in his vicinity, as well as his own part, in order that the actions of his platoon will be completely coordinated with the general plan. He especially must know all prearranged signals for lifting or ceasing fire.

g. For further details of the attack of a fortified position, see FM 31-50.

SECTION X

ANSWERS

59. ANSWERS. a. Figure 5. No member of the crew is observing the gun. (See check list, par. 5e.)

b. Figure 20. This gun position is basically wrong. The gun is emplaced under a small prominent group of trees; the small tree trunks immediately in rear of the gun afford a poor background. Furthermore, the concealment of the gun depends largely upon shadow; the shadow of the tree already is moving away from the sun.

c. Figure 21. Tree limbs do not grow horizontally out of a clump or low brush. The smooth, bright limbs are very likely to attract the enemy's attention.

d. Figure 22. Nothing in nature is straight or rectangular. A flat-top net is easily recognized by the enemy. The top should be supported irregularly by poles of varied lengths, as shown in the top illustration of this figure.

e. Figure 23. The location is a good one because the hump of the camouflaged gun looks like it is a part of the low hill. Garnishing the net with local foliage would improve the camouflage.

f. Figure 28. This unnatural hump clearly indicates an emplacement. It is very difficult to camouflage a gun emplaced on a "sky line."

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